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## ECONOMICS FOR BEGINNERS

BY

## HENRY DUNNING MACLEOD, M.A.

OF TRINITY COLLEGE, CAMBRIDGE, AND THE INNER TEMPLE, BARRISTER-AT-LAW, SELECTED BY THE ROYAL COMMISSIONERS FOR THE DIGEST OF THE law to prepare the digest of the law of bills of exchange, bank notes, etc.

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# REVEREND STEPHEN HAWTREY, M.A. 

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FORMERLY HEAD MATHEMATICAL MASTER AT ETON COLLEGE.
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## My dear Mr Hawtrey,

I inscribe this little work with your name in memory of the benefit I derived from your teaching long long ago.

If I have been able to do anything for the Science of Economics, it is mainly due to the thorough and constant drilling in Euclid which you gave the little band who used to meet in your room forty years ago, when Mathematics were an exotic at Eton.

The Great Geometer certainly never had a more zealous hierophant than yourself, and I hope that no sacrilegious hand will ever be able to molest his ancient reign.

I would fain believe that you may be pleased to hear that the Theory of Algebraical Signs, which was then a Cambridge novelty, and which you took such pains to indoctrinate us with, has cleared up a point in the Theory of Credit which has puzzled jurists and divines for 1300 years, and has hitherto been an insoluble enigma to Economists.

Hoping that you may long have health and strength to enjoy your well-earned repose, and that, happy in the esteem of many generations of Etonians, it may be said of you hereafter that a good Providence
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 Believe me,

Your ancient and affectionate Pupil,
H. D. MACLEOD.

## PREFACE.

The most advanced Economists in the world are now satisfied that ancient Authors were right in holding Exchangeability to be the sole essence and principle of Wealth : that everything which can be bought and sold, whatever its nature may be, is Wealth : and consequently that the Science of Political Economy, or, as it may more aptly be termed, Economics, is the Science of Exchanges or of Commerce.

This little work is an exposition of the broad outlines of the Science according to this view, which is that of the Third School of Economists, whose doctrines are now rapidly gaining the ascendency throughout the world.

If any readers should wish to see a fuller exposition of the reasoning upon which its conclusions are founded, I may refer them to my 'Principles of Economical Philosophy,' or my Lectures given in the University of Cambridge with the Recognition of the Board of Moral Sciences, in which I have traced the rise and progress of Economical ideas from the earliest antiquity to the present time.
H. D. M.

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## ECONOMICS FOR BEGINNERS.

## INTRODUCTION.

On the Meaning of the Term Political 玉conomy and on the Three Schools of Modern Economists.

1. The term Political Economy has undergone several changes of meaning since it was first originated. The science also of Political Economy, or Economics, as it may more aptly be termed, has already undergone one transformation since it was first created in modern times : and it is now undergoing another, It is, therefore, necessary to state briefly these changes of meaning of the term Political Economy, and also to give a broad general outline of the development of the science in modern times.

The three schools of modern Economists may be broadly grouped according to the meaning they attribute to the word Wealth : and, consequently, the clearest way in such a short general outline as this is, is to give a brief exposition of the meaning given to this word. And it must not be supposed that this is merely a matter of curious speculation or ingenious logomachy. Not only is this word the bas:- of a great science, but there is none which has so seriously influenced the history
of the world and the welfare of nations according to the meaning given to it at various periods.
2. For many centuries the legislation of every country in Europe was moulded by the meaning given to the word Wealth. J. B. Say, the eminent French Economist, says that during the 250 years preceding his time, fifty were spent in wars directly originating out of the meaning given to this word. Speaking of the Mercantile System, which was expressly framed on a particular meaning of the word Wealth, Storch says, 'It is no exaggeration to affirm that there are very few political errors which have produced more mischief than the Mercantile System. . . . It has made each nation regard the welfare of its neighbours as incompatible with its own : hence their reciprocal desire of injuring and impoverishing one another ; and hence that spirit of commercial rivalry which has been the immediate or remote cause of the greater number of modern wars. . . . In short, where it has been least injurious it has retarded the progress of national prosperity : everywhere else it has deluged the earth with blood : and has depopulated and ruined some of those countries whose power and opulence it was supposed it would carry to the highest pitch.'

So Whately says, 'It were well if the ambiguities of this word had done no more than puzzle philosophers. . . . It has for centuries done more, and perhaps for centuries to come will do more, to retard the progress of Europe than all other causes put together.'

These extracts, which are nothing but the literal truth, show the gravity and the importance of the inquiry.

> On the Meaning of saying that Political Economy, or Economics, is a Physical Science.
3. It is now universally admitted that Political Economy, or Economics, or, as it is often called, the Science of Wealth, is a Physical Science, and that investigations in it are to be pursued
in exactiy the same manner, and its conclusions are to be tested by the same principles, as those of other Physical Sciences. We must say a few words to explain the meaning of this.

A Physical Science is a definite body of phenomena all based upon a single idea, or quality, of the most general nature ; and the object of the science is to investigate the laws which govern those phenomena. And any Quantity whatever in which that Quality is found is an element, or constituent, in that science, no matter what other Qualities may be found in it. Hence Quantities of the most diverse forms and natures, and agreeing in no single other respect than the possession of that single Quality, are all elements in that science.

Bacon says, 'Whosoever is acquainted with forms embraces the unity of nature in substances the most unlike. . . . A nature being given, we must first of all have a muster or presentation before the understanding of all known instances which agree in the same nature, though in substances the most unlike.'

Let us consider the application of this canon to the best known physical science, Dynamics. Dynamics is the science of Force : and a Force is defined to be 'Anything which causes, or tends to cause, motion or change of motion.' This word 'anything' is of a very wide nature, and includes Quantities which agree in nothing else than in the Quality of Force. Some Forces are material, like men and animals. Others are incorporeal, like gravity, electricity, and magnetism, if indeed these are not merely different manifestations of the same force. Others are explosive, like gunpowder, dynamite, \&c. These several things, though agreeing in no other single Quality, are all Forces.

Hence when we are told that Political Economy, or the Science of Wealth, is a Physical Science, we must first ascertain what that Quality of things is which constitutes them 'Wealth:' then we must ascertain how many diverse and distinct Quantities there are which possess that Quality: and then the Science of Wealth, or Economics, is the Science of the Laws. which govern the phenomena relating to that Quality.

## On the Origin of the term Political weonomy.

4. The term Political Economy is first used in the second book of the Economics attributed to Aristotle, but which is undoubtedly spurious. Economy, or Economics, means in Greek the means of raising a revenue : and the author says that there are four kinds of Economics-the Regal, the Satrapical, the Political, and the Domestic. The word módıs (polis) in Greek means a free state ; hence the term Political Economy in this passage means the method by which a free state raises a revenue. We are not aware of the term being used again till modern times.

## On the Meaning of the word wrealth in Ancient Times.

5. Ancient writers unanimously held that Exchangeability, or the capability of being bought and sold, is the sole essence and principle of Wealth; and that whatever can be bought and sold, or exchanged, is Wealth, whatever its nature may be.

Thus Aristotle says, 'And we call wealth everything whose Value can be measured in Money.' So Ulpian, a celebrated Roman jurist, says, 'That is wealth which can be bought and sold.'

We have here a definition of the same wideness and generality as the definition of Force we have already given. Ancient writers showed that there are three distinct kinds of things which can be bought and sold, and they expressly classed all these three distinct kinds of things under the term wealth. Thus not only material things can be bought and sold, and are therefore Wealth : but Labour can be bought and sold, and was therefore classed as Wealth : and besides that, a vast varicty of abstract Rights, quite separate from any material things, can be bought and sold : and were therefore classed as Wealth. One of the fundamental definitions of Roman Law says, 'Under the term Wealth (pecunia) all things, both movable and immovable, both corporeal and Rights, are in-
cluded.' And this doctrine is repeated several times in Roman Law.

Ancient writers thus showed that there are three distinct kinds, or orders, of Quantities, which can be bought and sold. And reflection will show that there is nothing which can be bought and sold which is not of one of these three forms. Hence there are three, and only three, orders of Exchangeable Quantities : and all Commerce in its widest extent consists of the Exchanges of these three orders of Quantities.

And as these three orders of Quantities may be combined two and two in Six different ways, it follows that Commerce in its widest extent consists of six different kinds of Exchange.

Hence, as the Quality of things which constitutes them Wealth is Exchangeability, it follows that Political Economy, or Economics, or the Science of Wealth, is the Science of Exchanges, or of Commerce in its widest extent.

Thus it is seen that the ancients possessed the true scientific instinct : they unanimously fixed upon one general Qualitynamely, Exchangeability, or the capability of being bought and sold-as the sole essence of Wealth, and they searched out and classed all the different kinds of Quantities which possess that Quality, and classed them as Wealth.

## On the Rise of Economical Ideas in Modern Times.

6. We must now very briefly trace the rise and progress of Economical ideas in modern times : and the circumstances out of which the first school of Economists arose : then the peculiar doctrines which they held, which produced a reaction against them, and gave rise to the second school of Economists. We shall then state the advances made by the second school of Economists, and the defects of their system which has produced a reaction against them, and given rise to the third school of Economists.

For many centuries it was held that Gold and Silver only are Wealth ; and the legislation of every country in Europe was
directed to encourage the importation of these metals, and to prevent their exportation by every possible means. About the end of the seventeenth century it was perceived that it was absurd to restrict the term Wealth to gold and silver only, and it was enlarged to mean all the products of the earth which conduce to the comfort and enjoyment of men.

## Rise of the First School of Economists in France, called the Physiocrates.

7. The first school of modern Economists arose in France about 1750. At that time the country was suffering the most grievous misery from the results of the wars of Louis XIV.; the failure of Law's scheme of paper money : and the system of prohibitions and obstructions to commerce, or the free interchange among nations of their products; and the iniquitous system of taxation. A few righteous philosophers, reflecting on the intolerable misery they saw around them, struck out the idea that there must be some great natural science ; some principles of eternal truth, founded in nature itself, with regard to the social relations of mankind, the violations of which were the causes of that hideous misery they saw around them. They named this the science of Natural Right, and their object was to discover and lay down an abstract science of the natural rights of men in all their social relations. This science comprehended their relations towards Government, towards each other, and towards Property. They also called this great science Political Economy, or the science of the regulation of the state. Hence they were called the Economists; and also Physiocrates, from the term Physiocratie, which one of their number called the science.
8. In this brief outline we can only notice their doctrines relating to Property. This part of their system they called the 'Production, Distribution, and Consumption of Wealth.' To understand the meaning of this phrase we must first state the meaning they gave to the word Wealth.

They defined Wealth to be the material products of the earth which are brought into commerce and exchanged, and those only. They expressly excluded from the term wealth those products which the owners consumed for their own use and enjoyment : these latter they termed biens : those only which were exchanged they termed richesses. They expressly excluded Labour and Rights from the term Wealth : because they alleged that to admit Labour and Rights to be Wealth would be to admit that Wealth can be created out of nothing. It was their fundamental dogma that the earth is the only source of Wealth ; because, as they repeated a multitude of times, man can create nothing, and Nothing can come out of Nothing.

We must now state what they meant by the 'Production, Distribution, and Consumption' of Wealth, because its true and original meaning has been quite misconceived by recent writers. This phrase is one and indivisible, and meant the Commerce or Exchange of the Material Products of the earth.

By Production the Physiocrates meant obtaining the raw produce from the earth and bringing it into Commerce.

But this raw produce is scarcely ever in a fit state or in a fit position to be used by men : it has to be manufactured and transported from one place to another, and perhaps sold and resold more than once, before it is ultimately used. All those intermediate processes which took place between the original producer and the ultimate buyer the Physiocrates termed Traffic or Distribution.

The person who ultimately purchased the products so fashioned for his own use and enjoyment they termed the Acheteur-Consommateur, because this was the completion (consommation) of the transaction.

The complete passage of the product from the original Producer through all the intermediate stages to the Consumer, che Physiocrates designated as Commerce or Exchange. And as, originally, any person who wished to consume or enjoy any product must have some product of his own to give to purchase it, he also was a Producer in his turn. Hence in an Exchange
products are consumed (consommés) on both sides. An exchange has only two essential terms-a Producer and a Consumer. These are the only two parties necessary to Commerce : the first seller and the last buyer-consumer ; and they often exchange directly between themselves without any intermediate agents.

It is thus seen that the ' Production, Distribution, and Consumption of Wealth ' meant simply the science of the commerce or exchange of the material products of the earth.

To take a very simple instance-The farmer grows the corn and brings it into the market : he is the Producer.

He sells the corn to the miller : the miller grinds the corn into flour, and sells it to the baker. The baker bakes the flour into bread, and sells it to the Consumer.

The sale of the corn to the miller and the sale of the flour to the baker the Physiocrates called Traffic or Distribution. The sale of the bread to the buyer they called Consumption: and the complete passage of the corn from the farmer to the Consumer was Commerce or Exchange.

But the word Distribution was often used as equivalent to Consumption.

Hence the expression 'Production, Distribution, and Consumption of Wealth' is one and indivisible, and meant the Commerce or Exchange of the material products of the earth. But also 'Production and Consumption' and 'Production and Distribution' meant exactly the same thing. Each of these expressions meant simply Exchange, and every act of Exchange is a phenomenon of Value.

These two expressions, ' Production, Distribution, and Consumption of Wealth' and 'Exchange' or 'Commerce,' being thus expressly declared to be identical by the Economists who originated them, have been adopted respectively as the definition of Political Economy by the two schools of Economists who have succeeded them.
9. We have now to state a peculiar doctrine of the Physiocrates. By Productive Xabour they meant Labour which
leaves a Profit after defraying its cost ; and they maintained that agricultural labour is the only kind of labour which leaves a profit after defraying its cost-that is, that it augments the quantity of the material products of the earth, and thus it adds to the Wealth of the nation. The excess of the material products of the earth after defraying the cost of obtaining them, accumulated every year, they called the Produit Net. They alleged that all other classes of the community are maintained out of this Produit Net: and that its Value is the sole revenue and income of the state : and the sole increase of Wealth : and, as a necessary consequence of such a doctrine, they maintained that all taxation should be levied directly on the rent of land.

All other labour expended on the raw produce of the earth, either in fashioning it, manufacturing it, or transporting it, they called 'Sterile' or 'Unproductive,' because they alleged that it adds nothing to the Wealth of the country ; and they maintained that neither the labour of artisans nor the operations of commerce enrich the country.

They alleged that commerce cannot enrich a country, because it is only the exchange of equal value for equal value ; and consequently that the gains of traders in sales are no increase of the Wealth of the nation.

They alleged that the labour of artisans in manufactures is sterile or unproductive, because, though their labour adds to the value of the product, yet during the process of manufacture the labourer consumes his subsistence ; and the increased value of the product only represents the value of the subsistence destroyed during the labour. Hence they said that though there is an increase of Value there is no augmentation of Wealth.

These doctrines the Physiocrates maintained through long and repeated arguments. How men of the ability of the Physiocrates could maintain that a country cannot be enriched either by commerce or manufactures, with the examples of Tyre, Carthage, Venice, Holland, Florence, England, and scores of other places before their eyes, is incomprehensible. With such patent glaring facts before them it is surprising that they were
not led to suspect the truth of their reasonings. It is one of the aberrations of the human intellect which we can only wonder at, but not explain.

The Physiocrates only admitting material products to be Wealth, maintained that all exchanges are of products against products.

Reaction against the Physiocrates : Rise of the Second School of Economists.
10. The extraordinary doctrine of the Physiocrates that neither Commerce nor Manufactures can enrich a nation, so contrary to the plainest facts of history, naturally produced a reaction against them throughout Europe. The Italian Economists were the first to declare against them. But we need not notice them in this brief outline, because they never formed a school, as the English and French Economists did : nor was any Italian work ever adopted as a kind of national text-book, like those of Smith, Ricardo, and Mill in England, or Say in France.

In the same year-1776-appeared simultaneously the two works which lead the two modern schools of EconomistsSmith's 'Wealth of Nations' and Condillac's 'Le Commerce et le Gouvernement.' These two works, though apparently so different in name, are in reality identical in conception. They both begin by taking the Theory of Value, or of free commerce, as the natural state of things, and then afterwards consider the interference of Government. Smith and Condillac were the associates of the Physiocrates, and emanated from their school, but they both revolted against the doctrine that manufactures and commerce do not enrich a nation. Smith's work attained immediate popularity : Condillac's was forgotten ainid the crash of the French Revolution. Smith's first book is on 'Production and Distribution;' Condillac at once says that Economics is the Science of Commerce. These ideas are identical : but Smith was the parent of the earlier school, and therefore we shall follow his line first.

Smith's work begins with 'Production and Distribution,' but he knew the meaning of the term as used by its originators, the Physiocrates : and he says that its purpose is to 'investigate the principles which regulate the exchangeable Value of commodities.' Thus he sees that the true meaning of the term 'Production and Distribution' is the Theory of Value. McCulloch, on the very first page of his edition of Smith, says that Political Economy may be called the Science of Values.

Ricardo calls his work ' Principles of Political Economy,' but it is nothing but a treatise on Prices-i.e. Value.

It is impossible to understand the scope or purpose of Smith's work without knowing the doctrines of the Physiocrates. The last chapter of the fourth book is a formal refutation of their system : but almost every part of it is written with express reference to their doctrines. The express purpose and scope of Smith's work is to refute the doctrine of the Physiocrates that manufacturing and commercial industry are sterile and unproductive, and to prove that all labour is productive and enriches a nation. And, as scientific reactions very often go from one extreme to another, from Labour being counted as nothing it came to be counted as everything : and it came to be held that Labour is the sole source of all Value and of all Wealth. The slightest observation and knowledge of practical business shows the utter fallacy of such an idea. As Lord Castlereagh said, the pendulum first swung to one side and then it swung to the other, and therefore it could not rest in the middle.

We have now to endeavour to collect what Smith means by Wealth. The Physiocrates, as we have seen, restricted the term to the material products of the earth, which are brought into commerce and exchanged. Thus they made Exchangeability essential to Wealth.

Smith does not begin by expressly defining Wealth : but he speaks of the 'real wealth of the country, the annual produce of land and labour :' and, from the number of times he repeats this expression, we may assume that to be very much his idea of it ;
especially as it was an expression in common use by the Econcmists of other countries.
11. It would be too long in this brief outline to point out the palpable objections to such a definition of Wealth. It will be seen that Smith in this phrase has omitted the idea of exchangeability ; and thus lost sight of the essential distinction made by the Physiocrates between the products which were consumed at home and those brought into commerce and exchanged.

It will be sufficient here to show Smith's inconsistencies. After beginning with the idea of Wealth as being the 'annual produce of land and labour,' he subsequently includes human abilities as fixed Capital, and part of the Wealth of the nation. Hence he admits that Labour is Wealth ; and the whole of the second school of Economists treat Labour as an Exchangeable Commodity, and discuss the Value of Labour as that of any material commodity. Now, human abilities are certainly not the 'annual produce of land and labour.' Thus Smith has already broken away from the Physiocrate nomenclature, because they expressly excluded Labour from the term Wealth. In point of science the second school of Economists are right. Labour is an exchangeable commodity. It has Value ; and the laws of its Value are the same as those of any material commodity. But then it is a very awkward matter for the fundamental conception of the science. For how are we to speak of the 'Production, Distribution, and Consumption' of Labour ?
12. Hence it is seen that the introduction of Labour into the science of the Production, Distribution, and Consumption of Wealth has already given it a very awkward wrench. But still worse remains behind : for under the term Circulating Capital Smith expressly includes Bank Notes, Bills of Exchange, and other Securities ; but these are simply Rights or Credit : and in this he has been followed by the whole of the Second School of Economists. All modern writers call Bank Notes Capital.

But Bank Notes are merely Rights or Credit : hence all modern writers include Credit under the title of Capital.

Now, when Bank Notes, mere Rights or Credit, are admitted to be Capital, the definition of the Science as the Production, Distribution, and Consumption of Wealth becomes unintelligible. For who would understand the meaning of the Production, Distribution, and Consumption of Debts or Credits? whereas everyone knows that Debts of all sorts are bought and sold like any material commodity. The most colossal branch of commerce in modern times-the system of Credit-consists exclusively in buying and selling Debts : and the exchangeable relations of Debts are governed by exactly the same general Law of Value as the exchangeable relations of material commodities.

Moreover, Bank Notes, Bills of Exchange, \&c., which are merely abstract Rights, are only the type and one variety of a gigantic mass of Rights of diverse sorts, which receive different names according to the source from which they spring. Thus the Funds, Shares in Commercial Companies, the Goodwill of a business, Copyrights, and many others, are nothing but abtract exchangeable Rights ; and in this commercial country this class of Exchangeable Property far exceeds material property. At the present time a man might be the richest person in the whole universe, and yet not have one ounce of tangible and visible wealth except the clothes on his back. He might have twenty millions in the Funds, twenty millions in Shares in companies, and other kinds of Rights, and yet not have one particle of Wealth which could be handled or seen.

Moreover, the whole of the Second School of Economists have failed in this. Though they admit one class of Rights to be Wealth, they never made the slightest attempt to explain the mechanism of the commerce in these Rights. They never made the slightest attempt to bring the subject of Credit and Banking into the general body of the science : in fact, they have given up the whole subject of Banking in hopeless despair.

Thus we see that the term 'Production, Distribution, and

Consumption of Wealth' is only intelligible when applied, as it was meant to be, only to one class of Exchangeable Quantities, and to one class of Exchanges; while by the unanimous admission of the second school Labour and Rights are Wealth. And this is alone fatal to the whole of the system of the second school, whatever isolated truths it may contain.

The fact is that Economics has burst the bonds of the Physiocrate nomenclature. The fundamental conceptions of the Physiocrates were framed to include the single class of material products, and when the Second School of Economists came and included Labour and Rights in it, which were expressly excluded by its founders, they stretched the definition so as to include these new objects. But the attempt was hopeless, and only led to confusion. It was like putting new wine into old bottles : and Bacon says it is idle to expect any great advancement in science from superinducing and engrafting new things upon old. We must begin again from the very foundations. To obtain a fitting general conception of the science we must turn to another School of Economists.

## Reaction against the Second School of Economists: Rise of the Third School of Economists.

13. But when we adopt the other definition of the science, which its founders declared to be equivalent and identical-that of Exchanges or Commerce-it is like the transformation scene in a pantomime. Where everything was incomprehensible chaos before, like as from the stroke of an enchanter's wand it settles into harmony and order.

In 1776 -the same year that Smith published his workCondillac, the French metaphysician, published his 'Le Commerce et le Gouvernement,' with identically the same objectnamely, to show that both commercial and manufacturing industry enrich a nation. He begins at once by saying that Economic Science is the Science of Commerce : thereby only expressing the idea of the Physiocrates as to the Production

Distribution, and Consumption of Wealth in a much more simple and intelligible form, and one-which is its great ad-vantage-which is general.

The first person in this country who distinctly enforced this view, that we are aware of, is Whately, when Professor at Oxford. 'Smith has designated the work a treatise on the Wealth of Nations, but this supplies a name only for the subject-matter, and not for the science itself. The name I should have preferred as the most descriptive, and, on the whole, least objectionable, is that of Catallactics, or the Science of Exchanges. . . .
' In this science the term Wealth is limited to Exchangeable commodities ; and it treats of them so far forth only as they are, or are designed to be, the subjects of exchange. But for this very reason it is, perhaps, the more convenient to describe Political Economy as the science of Exchanges than as the science of national Wealth. For the things themselves of which the science treats are immediately removed from its province if we remove the possibility or the intention of making then the subjects of exchange ; and this though they may conduce in the highest degree to happiness, which is the ultimate object for the sake of which wealth is sought. . . .
' In like manner a musical talent, which is Wealth to a professional performer who makes the exercise of it a subject of exchange, is not so to one of superior rank, who could not without degradation so employ it.'

The next writer we may mention is Bastiat. He says, 'Exchange is Political Economy.' 'The causes, the effects, the laws, of these Exchanges constitute Political Economy.' And speaking of persons rendering each other services, he says, 'There true Political Economy begins, because it is there we see the first appearance of Value.'

The most eminent Economists in America adopt the same system. Thus Professor Perry, of Williams College, says, 'Political Economy is the science of Exchanges, or, what is exactly equivalent, the Science of Value.' 'Wherever Value
gree this science goes: wherever Value stops this science stops. Political Economy is the science of Value and of nothing else.
14. Adopting, then, this conception of the Science of Economics, which is clearly seen to be the mere generalisation of the ideas of the two preceding schools, and which must commend itself to everyone accustomed to the study of other sciences, we have a distinct body of phenomena all based upon a single idea, and therefore fitted to form a great demonstrative science of the same rank as Mechanics, or Optics, or any other physical science. Another great body of particulars is won from the vague, floating, and uncertain mass of knowledge, and fixed and circumscribed by a definition, and formed into a great inductive science, whose investigations must be governed by the same general principles of inductive logic as others are, and yet will be found to contribute its quota to inductive logic, bearing a general similarity to its sister sciences and yet with peculiarities of its own-

Facies non omnibus una, Nec diversa tamen : qualis decet esse sororum.

The expression ' Production, Distribution, and Consumption of Wealth ' meant simply the Theory of the Value of one class of Quantities, the material products of the earth, while the Science of Exchanges means the Theory of Value or of Commerce in general, and includes all Exchangeable Quantities, and all Exchanges of every form and variety.
15. We will now give a few examples to illustrate the difference between the two expressions.

Suppose a person has a piece of land upon which other persons want to build houses : the land rises greatly in value : the owner sells the land: that is an Exchange and a phenomenon of Value : but how is it the Production, Distribution, and Consumption of Wealth ?

An author writes a popular work : he can sell the Copyright of it to a publisher : that is an Exchange and an instance of

Value : but how is it the Production, Distribution, and Consumption of Wealth?

Two persons agree to do some work for each other : that is an Exchange and an instance of Value : but how is it the Production, Distribution, and Consumption of Wealth?

A banker discounts a Bill for a customer by giving him a Credit in his books. That is an Exchange and an instance of Value : but how is it the Production, Distribution, and Consumption of Wealth ?

These few examples, which might be multiplied to any extent, show that the expression ' Production, Distribution, and Consumption of Wealth' is only intelligible when applied to one class of commodities; while the expression Science of Exchanges is applicable to all exchanges of every description.
16. Moreover, by adopting this definition we see at once how Political Economy, or Economics, is a physical science. What is there in the name Production, Distribution, and Consumption of Wealth to suggest any resemblance to a physical science? But as soon as we adopt the alternative and equivalent definition of the Science of Exchanges, we see at once how it is a Physical Science. Because, there being three orders of Exchangeable Quantities, and therefore six species of exchanges, the object of the science is to determine the Laws of the pher omena of these Exchanges : that is, the changes in the numerical relations in which these several Quantities will exchange. And as there is a single general law which governs the motions of the heavenly bodies, and which explains all the phenomena of Astronomy, so it is perfectly easy to show that there is a single general Law which governs all the changes in the numerical relations of Exchangeable Quantities. And thus we have a new Physical Science created, a new body of phenomena, all based upon a single general conception, brought under the dominion of general laws.
17. Thus it is now clearly seen to be a Physical Science : but it is also a Moral science ; because its laws are based upon the mores-the $\eta \theta \eta$-of men. For we find that the same general laws of exchange hold good among all nations, among the rudest and the most civilised, in all ages and countries. We find that the same causes are invariably followed by the same effects : and that is the reason why Economics may be raised to the rank of an exact science : a permanent and universal science of the same nature as the physical ones : because it is based upon principles of human nature which are found to be as permanent and universal as those of physical substances upon which physical sciences are based. And therefore it is a physical moral science, and the only moral science which is capable of being raised to the rank of an exact science.

## On the Terms Political 玉conomy and Economics.

18. The Physiocrates used the term Political Economy to denote all the relations of men to the State, to each other, and to Property. But J. B. Say was the first to restrict the term Political Economy to the Production, Distribution, and Consumption of Wealth; as he very justly observed that the question of Wealth was wholly independent of different forms of Government. Whately proposed the name Catallactics to denote its character more clearly. But this change was too great to be readily received. There is no advantage to be gained by completely changing the name of a science which has once acquired a firm hold on popular usage. There are few sciences which have not received a great extension or alteration of the application of what the meaning of their names would suggest. The name of Political Economy, or Economic Science, is so firmly rooted in the public mind that no advantage would be got by changing it. Moreover, the true character of the science is expressed in its very name. It is sometimes supposed that in Greek oikos means a house, and that an Economist is the master of a house. But oikos has a very much
wider meaning than that. In the whole range of Greek literature, from Homer to Ammonius, oikos is used to mean Property of all sorts. It is the technical term in Attic Law for a man's whole substance or estate : hence it includes not only all such property as land, houses, cattle, corn, and all material things, but also such property as the Funds, Shares in Commercial Companies, Copyrights, \&c. Hence the word Economics is the very best term that could be devised to denote the Science which treats of the Laws of Property.

Seeing, then, that the term Political Economy was expressly designed by its originators to include the political relations of men, which are now excluded from the science, and that the term Economics clearly indicates that the science is restricted to Property, we shall henceforth use it exclusively in this work : and Economics may be defined to be the Science which treats of the Laws which govern the relations of Exchangeable Quantities.

And M. Michel Chevalier has done us the honour to say that he thinks this to be the best definition of the science which has yet been proposed.

## CHAPTER I.

## DEFINITION OF TERMS USED IN ECONOMICS.

## Meaning of Economics.

1. Economics is the Science which treats of the principles and mechanism of Commerce in its widest extent : or it may be called the Science of $\mathbf{x x c h a n g e s . ~}$

The word Economics is derived from two Greek wordsoikos (oikos), which means Property of all sorts and descriptions, including not only lands, houses, cattle, money, \&c., but also such Property as Bank Notes, Bills of Exchange, the Funds, Shares in Commercial Companies, Copyrights, \&c., all of which can be bought and sold ; and עó $\mu o s$ (nomos), a law. Hence Economics is the Science which treats of the laws which govern the relations of Exchangeable Quantities. It may also be called the Science of Value : it is also sometimes called the Science of Wealth.

## On the Meaning of Wealth, or an Economic Quantity.

2. Ancient writers unanimously held that Exchangeability is the sole essence and principle of Wealth : that the word Wealth means anything whatever which can be bought and sold ; and consequently that whatever can be bought and sold, whatever its nature may be, is wealth.

Thus Aristotle says, 'And we call wealth everything whose value can be measured by money.' So Ulpian, one of the
most eminent Roman jurists, says, 'For that is wealth (res) which can be bought and sold.' The most recent Economists are now agreed that this is the true definition of Wealth. Thus Mill says, 'Everything forms, therefore, a part of Wealth which has a power of purchasing.' This is the definition which we adopt.

## On the Three Species of Wealth ; or Economic Quantities.

3. Wealth, then, being defined to be anything which can be bought and sold, or exchanged, whatever its nature may be, we have next to ascertain how many distinct kinds of things there are which can be bought and sold.
I. There are Material things, such as lands, houses, cattle, money, jewelry, gold, silver, corn and innumerable other things of that nature.
4. The author of an ancient Greek dialogue called the ' Eryxias,' or 'On Wealth,' which usually passes under the name of ' Æschines Socraticus,' adopting Exchangeability as the criterion of Wealth, showed that if a man can gain his living by giving instruction in science, that science is Wealth to him for exactly the same reason that gold and silver are Wealth. All modern Economists-Smith, Say, Senior, Mill-agree that human abilities, skill, energy, and capacity are Wealth. The exertion of human abilities, skill, and energy in any form which is paid for, is Iabour. And a person may sell his Labour, or services, in many capacities, such as a ploughman, an artisan, an advocate, a physician, an engineer, \&c., and when a sum of money is paid for this Labour its Value is measured in money as precisely as if it were a material chattel. Therefore Labour is Wealth.
5. It is laid down as a fundamental definition in Roman Law that 'under the term wealth (pecunia) not only ready money but everything, both immovable and movable, both corporeal as well as Rights, is included.

In modern times an immense mass of Property of the form of mere abstract Rights has come into existence, such as Bank

Notes, Bills of Exchange, the Funds, Shares in Commercial Companies, Copyrights, Patents, and many other kinds. All this kind of Property can be bought and sold, and therefore its value is measured in money as precisely as that of any material chattel. For this reason it is called in Roman Law Res, Bona, Merx : and therefore in Economics Wealth.

We have thus found three distinct orders of Quantities which can be bought and sold, or whose value can be measured in money: and are consequently wealth : and there are no more. There is nothing whatever which can be bought and sold which is not of one of these three forms : either it is a material thing : or it is some kind of labour or service : or it is an abstract right. And all commerce in its widest extent consists of the exchanges of these three orders of Quantities.

## Commerce or Economics consists" of six distinct kinds of Exchange.

4. As it has now been seen that there are three, and only three, distinct orders of Wealth, or Exchangeable Quantities, it follows that there are six distinct kinds of Exchange : these are-
5. The exchange of a Material thing for a Material thingsuch as so much corn, cattle, or land for so much gold.
6. The exchange of a Material thing for so much Labour or Service-as when gold or silver money is paid as wages, salary, or fees.
7. The exchange of a Material thing for a Right-as when lands, houses, cattle, \&c., are paid for in Bank notes, bills of exchange, cheques.
8. The exchange of Labour for Labour-as when persons agree to exchange one kind of labour or service for another kind of labour or service.
9. The exchange of Labour for a Right-as when wages are paid in bank notes.
10. The exchange of one Right for another Right-as when
a banker buys a bill of exchange, which is a Right, by giving in exchange for it a Credit in his books, which is another Right.

These six kinds of exchange comprehend all commerce in its widest extent, and in all its forms and varieties. And they constitute the great Science of Economics, or the Science which treats of the Exchanges of Property.

## On the Meaning of the word Property.

5. Having found that there arc three distinct kinds of Wealth, or Exchangeable Quantities, we have next to find a general term which will include them all. This general term we shall find in the word Property : and when we understand the true meaning of the word Property, it will throw a flood of light over the whole of Economics.

Most persons, when they speak or hear of Property, think of some material things, such as lands, houses, cattle, money, \&c. But that is not the true meaning of Property. The word Property, in its true and original sense, does not mean a material thing ; but the absolute Right to use and dispose of something.

In early Roman jurisprudence the word Mancipium was used to mean the absolute ownership of anything as well as the thing itself; because it was supposed to be acquired by the strong hand, and if not kept with a firm grasp, might probably be lost again.

Afterwards the ownership of things was held to reside in the family, or Domus, but the head of the house, Dominus, alone exercised all Rights over them. Hence this Right was called Dominium ; no other member of the family could have any exclusive Right. Dominium, then, became the term in Roman Law for the absolute ownership of anything.

Afterwards, in the time of the early Emperors, the excessive rigour of the Patria Potestas was relaxed, and in some cases individual members of the family were allowed to have exclusive Rights to things : and this right was called Proprietas ; because it was restricted to the individual, and excluded everyone else.
' Dominium id est Proprietas,' says Neratius, a jurist of the age of Trajan and Hadrian.

Proprietas, therefore, in Roman Law meant absolute ownership, and not the things themselves.

The word Property was always used in this sense exclusively by early English writers. Thus grand old Wycliffe says, 'They will have Property of ghostly goods where no Property may be : and leave Property in worldly goods where Christian men may have Property.'

So Bacon invariably uses the word Property to mean a Right, and not a thing. He says one of the uses of the law 'is to dispose of the Property of their goods and chattels.' He explains the various methods by which 'Property in goods and chattels may be acquired.'

Property, then, in its true sense means solely a Right, Interest, or Ownership : and, consequently, to call material goods Property is as absurd as to call them Right, Interest, Ownership. It is quite a modern corruption of the word.
6. But though Property is a Right, all Rights are not Property. There is an essential distinction between the Right of Possession merely and the Right of Property. If I lend my friend a book or a horse, he has the Right of possession in these things so long as I lend them to him ; but he has not the Right of Property in them.

The Right of Property means the absolute Right to use a thing in any way we please : to make a profit by it ; or to sell or dispose of it in any way we please.

Thus when we speak of landed Property, house Property, funded Property, literary Property, we mean Rights to land, Rights to houses, Rights to payments from the nation, Rights to the profits from literary works.
7. Many words which are usually supposed to mean things in reality mean Rights. Thus an Annuity is the Right to demand a series of payments, and not the sums actually paid : the

Funds are Rights to demand a series of payments from the State, and not the money actually paid : Tithes are the Right to demand a certain portion of the produce of the earth, and not the produce itself : Rent is the Right to demand compensation for the use of lands, houses, \&c., and not the money actually paid. A Debt is the Right to demand a sum of money from a person and not the money due : and so on in a multitude of other cases.

## On Corporeal or Material: Immaterial : and Incorporeal Property.

8. Property being, then, clearly understood to mean a Right, there are three distinct kinds of Property-
I. Material or Corporeal Property.-There may be Property in some material physical substance, which is already in existence, and has come into possession of the Proprietor, like lands, houses, money, \&c.
9. Immaterial Property.-A man has the Right to the use of his own faculties, abilities, energy, and to the profits to be reaped by them. This is called Immaterial Property by the French Economist J. B. Say.
10. Incorporeal Property.-We may have a Right wholly severed from any specific corpus, or matter in possession. It may not even be in existence at the present time. Thus those who possess lands, fruit trees, cattle, \&c., have the Property in their future produce. Though the produce itself will only come into existence at a future time, the Property or Right to it when it does come into existence is present, and may be bought and sold like any material chattel.

Or the thing may be in existence, but it may be some one else's Property at the present time ; and only come into our possession at some future time. Thus we may have the Right to demand a sum of money from some person at some future time. That sum of money may, no doubt, be in existence, but it is not in our possession : it may not even be in the possession
of the person who is bound to pay it. It may pass through any number of hands before it is paid to us. But yet our Right to demand it is present and existing, and we may sell and dispose of it exactly as if it were a material chattel. Hence it is Property; but it is called Incorporeal Property in Roman and English Law, because it is a mere abstract Right, wholly severed from any specific substance.

Hence it is seen that the word wealth, or an Economic Quantity, means an Exchangeable Right: and that all exchanges are of Rights against Rights. When we exchange so much corn for so much gold, we exchange the Right to so much corn for the Right to so much gold ; and so on for all other species of exchanges.

## On the Application of the Positive and Negative Signs to Property.

9. Economic Quantities, or Economic Rights, are, then, of three species-
I. Property in some material substance which has already been acquired.
10. Property in ourselves, our talents, and abilities.
11. Property in something which is only to be acquired at some future time.

Now, we can absolutely part with and devest ourselves of the Property in material substances, or the first order of Economic Quantities.

In exchange for some reward we can transfer to some one else the Right to make use of our intellectual qualities or services on a special occasion. But though we may receive a reward for exercising our faculties in some person's service, we do not part with them : we may sell our knowledge, but it is not gone away from us. Like a candle which communicates light to others, it does not diminish our own light : a man may sell his instruction, but it does not diminish his own store.

The third species of Economic Quantities, or Rights, are
invisible and intangible, like the second species; but they are transferable, like the first ; and when we exchange or sell them, we devest ourselves absolutely of our Property in them, as we do of the first species.

Now, we observe that the two species of Property of which we can absolutely devest ourselves are Inverse to each other. Property, like Janus, has two faces, placed back to back. It regards the past and the future, and is therefore of opposite qualities. Now, in all physical and mathematical sciences it is invariably the custom to denote similar quantities but of opposite qualities by opposite signs. Hence, as a matter of simple convenience, and following the usual custom in physical science, if we denote one of these kinds of Property as Positive, we may, as a distinguishing mark, denote the other as Negative.

Thus if we denote Property in a product which has been acquired as Positive, it is perfectly consonant with the universal practice in physical philosophy to denote Property in a product that is to be acquired as INegative.

Now, Property in a thing which has been acquired is Corporeal Property, and Property in a thing which is to be acquired is Incorporeal Property. Hence, if we denote Corporeal Property by the Positive Sign, it is strictly in accordance with all physical philosophy to denote Incorporeal Property by the Negative Sign.

And as in all mathematical and physical sciences the whole science comprehends both Positive and Negative Quantities, so the whole Science of Economics comprehends both Positive and Negative Economic Quantities, both Corporeal Property and Incorporeal Property.

## On the Distinction between the Jus in rem or in re and the Jus ad rem, or the Jus in Personam.

10. We must now notice another division of Property of great importance.

Property is of two kinds-

1. Property in a specific chattel, termed a fus in rem or in
$r e$ in Roman Law, without being related to any one else ; called also Dominium. When a person has such a sole and exclusive Right in anything, he may sell or transfer it to anyone else in any way he pleases. Money is subject to this sort of Property: and hence a man may freely sell and transfer his own money, or any other chattel.
2. Property held in Contract, or Obligation, called in Roman Law fus ad rem or fus in Personam, where a person has a Right, but not to any specific thing, but only against a Person to pay or do something.

But Property held in Contract is of two kinds-
a. Where each party has Rights to receive and Duties to perform : such as the Nexum, or Obligation, between Lord and Vassal in feudal law : or that between Master and Servant at the present time. This is termed a Bilateral or Synallagmatic Contract.
b. Where there is only a Right to receive on one side and a Duty to perform on the other: such as the relation between Creditor and Debtor or Landlord and Tenant in modern times. This is called a Unilateral Contract.

Formerly it was held universally thit wherever Property was held in Contract of either sort, neither party could substitute another person for himself, at his own will and pleasure, and without the consent of the other party to the contract.

This rule must manifestly hold good in all Bilateral Contracts : because as each side has a Duty to perform, of course the person who has that Duty to perform cannot substitute anyone else to perform it without the consent of the other party.

Thus so long as the feudal law retained its pristine rigour neither the Lord nor the Vassal could substitute anyone else for himself without the consent of the other party. So in the case of Master and Servant at the present day : a master cannot transfer his household to anyone else without their own consent, as if they were cattle or slaves. Neither can a servant substitute anyone else in his place without his master's consent.

The same principle originally held good when the contract was unilateral, as in the case of Creditor and Debtor. The Creditor could not transfer his Right of action against the Debtor, because the Debtor never agreed to pay anyone except his own Creditor. It is a rule of law and common sense that no man can contract for another without his consent. Unless, therefore, the Debtor had agreed with the Creditor that he might transfer his right, the Creditor had no power to guarantee his Transferee that the Debtor would pay him. Accordingly, both in Roman and English law, for a long period, the Creditor could not transfer his Right of action against his Debtor without the Debtor's consent, so as to enable the Transferee to sue the original Debtor.

But nevertheless, though this may be true in theory, the party in an Obligation of this form who has the Right to demand soon begins to insist upon the power of transferring this Right like any other Property. And there is a very good reason for this; for in the Obligation or Contract of Debt there is manifestly a strong distinction between the two parties, the Creditor and the Debtor. The Debtor cannot substitute another Debtor for himself, because the Creditor may not have the means of knowing the solvency of the substituted Debtor. Therefore, by the very nature of things, the consent of the Creditor is indispensable to the substitution of a new Debtor ; as, for instance, no one can compel his Creditor to take payment of a Debt in the notes of a country banker. But the case of the Creditor is different. If a person really owes a Debt and has the means of paying it, it cannot make the slightest difference to him whether he pays it to $A$ or to $B$, provided he can get a discharge for it, and is not called upon to pay it twice over. Hence while the assignment of a new Debtor might seriously prejudice the Creditor, the assignment of a new Creditor can be no real prejudice to the Debtor.

In A.D. 224 the Emperor Alexander Severus enacted that a Creditor might sell his Right of action without the knowledge and without the consent of the Debtor ; and ever since then all
actions of every sort have been as freely saleable as any material chattel on the Continent. By a recent Act this principle has been adopted in England, and on November 1, 1875, the sale of Debts became absolutely free in England.

## On Property as 'Goods and Chattels.

11. We have seen that Property, including abstract Rights of all sorts, is included under the titles of Pecunia, Res, Bona, Merx, in Roman Law, because it can all be bought and sold. For the same reason abstract Rights are included under the terms 'Goods,' 'Goods and Chattels,' 'Chattels,' 'Vendible Commodities,' in English law.

Thus Blackstone says, 'For it is to be understood that in our law chattels (or goods and chattels) is a term used to express any Property which, having regard either to subject-matter or the quantity of interest therein, is not freehold.
' Property or Chattels personal may be either in possession or else in action. . . . Property-in-action is where a man has not the enjoyment (either actual or constructive) of the thing in question, but merely a Right to recover it by a suit or action at law.'

Thus all such Property as Debts, Bank Notes, Bills of Exchange, the Funds, Shares in Commercial Companies, Copyrights, \&c., are 'Goods and Chattels' in English Law, just as much as any material chattels.

## Definition of Value.

12. If at any time any Economic Quantity $A$ can be exchanged for any Economic Quantity B, then the Quantity A is termed the value of B in terms of A ; and B is the value of A in terms of B. Suppose that at any time one ounce of gold will exchange for fifteen ounces of silver, then it is said that one ounce of gold is of the Value of fifteen ounces of silver, which is this equation-
I oz. gold=15 oz. silver.

As Aristotle says, ' Now, the term Value is used in reference to External goods.' And it is said in Roman Law, 'The Value of a thing is what it can be sold for.' We may therefore say-

The Value of any Economic Quantity is any other Economic Quantity for which it can be exchanged.

Now, as any Economic Quantity can be exchanged for any other, any Economic Cuantity may have Value in terms of any of the others : and an Economic Quantity has as many Values as Quantities it can be exchanged for: and if it can be exchanged for nothing it has no Value.

## On Money and Credit.

13. In the primitive ages of the world there was no such thing as Money. Traders exchanged their products directly with one another. This exchange of products is termed Barter. The inconveniences of this mode of trading are palpable. It would give rise to endless disputes to determine how much of one product should be given for another. Some ingenious person would then discover that it would greatly facilitate traffic if the things to be exchanged were referred to some common measure. In the 'Iliad' and 'Odyssey' there are several passages in which things are estimated as being worth so many oxen. This does not imply, however, that these oxen served the purpose of Money. The state of barter continued, as it is quite common at the present day to exchange goods according to their value in money, without the use of actual money.

The necessity for Money arises from a different cause. As long as the things exchanged were equal in Value there would be no need for Money. But it would often happen that when one person required some product or service from his neighbour, that neighbour would not require an equal amount of product or service from him at the same time, or perhaps even none at all. If, then, a transaction took place with such an unequal
result, there would remain a certain amount or difference of product or service due from the one to the other, and this would constitute a Debt-that is, a Right, or Property, would be created in the person of the Creditor to demand this balance of product or service at some future time; and at the same time a Duty is created in the person of the Debtor to pay the product, or render the service, when required.

Among all persons who exchange this result must inevitably happen : persons want something from others when those others want nothing from them. And it is easy to imagine the inconveniences that would arise if persons never could get anything they wanted, unless the person who could supply these things wanted something in return at the same time.

In process of time all nations hit upon this plan : they fixed on some Material Substance, which they agreed to make always exchangeable among themselves, to represent the amount of Debt.

Suppose a wine-dealer wants a quantity of bread from a baker: but the baker wants only one-half the equivalent quantity of wine from the wine-dealer, or perhaps even none at all.

The wine-dealer takes the bread from the baker and gives him in exchange as much wine as he wants, and makes up the balance by giving an amount of this generally exchangeable merchandise : or if he wants no wine at all, the wine-dealer gives him the full Value or equivalent of the bread in this merchandise.

The baker perhaps wants shoes and meat, but not wine. Having received this merchandise from the wine-dealer, he goes to the shoemaker or butcher, and obtains the equivalent of the product he sold to the wine-dealer in the form of shoes or meat.

Thus is seen the fundamental nature of money, as this generally exchangeable merchandise is called. Its especial and particular purpose is to represent the Debts that arise from unequal exchanges among men, and to enable persons to ob-
tain the equivalent of the service they have done to one person from some one else.

Thus the true nature of Money is to be a Right or Title to demand something from some one else. Many writers have seen that this is the true nature of Money. Thus Aristotle says that Money is our Security that we may get something when we do want it, if we want nothing at present. Baudeau, one of the most eminent of the first school of Economists, says, 'This coined Money in circulation is nothing but effective titles on the general mass of useful and agreeable enjoyments. It is a kind of Bill of Exchange or Order payable at the will of the bearer.' So Smith says, 'A guinea may be considered as a sill for a certain quantity of necessaries and conveniences upon all the tradesmen in the neighbourhood.' Henry Thornton, the eminent banker, says, ' Money of every kind is an Order for goods.' So Mill says, 'The pounds or shillings which a person receives weekly or yearly are not what constitute his income : they are a sort of Ticket or Order which he can present for payment at any shop he pleases.'

Thus all these writers-and many more might be cited if our limits allowed us-have seen the true nature of Money. Different nations have used different substances to represent this universal want. Silver, copper skewers, carved pebbles, shells, blocks of tea, salt, dates, dried cod, sugar, tobacco, nails, powder and shot, logwood, belts of wampum, and many other things have been used for this purpose. But there is no substance which has so many advantages as a Metal : and of metals Gold and Silver are superior to any others, as they can be kept for any length of time without deterioration.
14. Now when persons take a piece of money in exchange for products or services, they can neither eat it, nor drink it, nor clothe themselves with it. They can make no direct use of it : they only take it because they believe they can exchange it away again for other things which they do require. It is therefore what is called Credit; as Edmund Burke says of gold
and silver, ' the two great recognised species that represent the lasting conventional Credit of mankind.'

Credit is therefore the Right or Property of demanding something from some one else. It is the Right to a future payment ; it is the Name of a certain species of Right or Property. Gold and silver money may be called ivetallic Credit.
25. So long as nations continue in a low state of civilisation all this Credit, or Money, is of some material substance ; but when they advance in civilisation they use Credit of another form. To revert to the case from which we showed how the necessity for Money originated-that of an unequal exchangesuppose that the Debtor, instead of the general merchandise called Money, gave the Creditor a simple Promise to pay the balance of product or services when required. Then the Creditor has only the Right to demand an equivalent in future from his own Debtor. Now, it is this abstract Right to demand something which in Law, Commerce, and Economics is termed Credit. But it is only a Right against a particular person. Suppose, for instance, that a person holds a tea merchant's promise to pay five pounds of tea. The Creditor may sell or transfer that Right to anyone else. Suppose he happened to want bread and the baker happened to want tea, the Creditor might sell the Right to demand tea in exchange for so much bread. Now, that Right is only to demand a particular thing, and only from a particular person : and that person may die or become insolvent, and may not be able to fulfil his promise.

Hence the Value of the Promise is particular and precarious. But if the tea merchant can fulfil his promise that promise is of the value of the tea. The tea is the value of the promise, and to anyone who wants tea the Promise is of exactly the same Value as so much Money. So if anyone wants anything, an Order for that thing is of the same Value to him as Money with regard to that particular thing. Such an Order, or Promise, of course has only one Value, whereas Money has a multitude of Values. And if the person who has given the Promise
cannot fulfil it, the Promise has lost its Value. Such an Order has therefore only particular and precarious Value, but Money has general and permanent Value.

Such an Order, or Promise, which is Credit, although of an inferior and lower form, is yet of the same general nature as Money. And because such Orders or Promises can be bought and sold like any material chattels, they are called Pecunia, Res, Bona, and Merx in Roman Law, and 'goods and chattels' in English Law.

It thus appears that it is quite possible to carry on the exchanges of society without material money. During the late civil war in America gold and silver money entirely disappeared from circulation, and private tickets of the nature just described took its place. Instead of Money people had their pockets filled with bread tickets, milk tickets, railroad tickets, \&c.

These Orders, or Promises, when recorded on paper, are called Paper Credit. In its simplest form it would have the particular service or product it was intended to command stated on the face of it. But it is found more generally convenient to make Paper Credit a promise to pay Metallic Money. But from what has been said it is clear that Credit is the Right to demand something from a particular person, and that Money is a general Right to demand anything from the commercial community. Hence it is clear that Money and Credit are homogeneous quantities, and that Money is the highest and most general form of Credit.

## On Sale or Circulation.

16. When commodities are exchanged directly with one another it is called Barter. When commodities are exchanged for Money, that Money is only taken in order that it may be exchanged away again for something else. Hence Say aptly said that when Money is used the transaction is half-an-exchange. It is also called a Sale or Circulation. Sale, or Circulation, always means a transaction in which one of the quantities, or
sometimes both the quantities, exchanged is Money or Credit. An exchange is always an interchange of things of a like nature, as products for products, or Money or Credit for Money or Credit. Thus we speak of the 'change or exchange of a Bank Note or Cheque for Money : or of exchanging a picture for a statue, or one book for another. When a person gives Money or Credit for a commodity he is said to suy it ; and the one who gives the commodity to sell it. Thus we buy a horse or a house with Money. Formerly an officer bought a commission in the army ; but he exchanged from one regiment to another. In 'Hamlet' Laertes says-

Exchange forgiveness with me, noble Hamlet.
The sum total of transactions in which Money or Credit is used is properly termed the Circulation.

## On the Meaning of Circulating Medium.

17. The term Circulating medium does not occur in Smith. It came into use in the last decade of the last century ; but there is no difficulty as to its meaning.

It has just been explained that transactions in which Money and Credit are used are called Sales or Circulation. Now the Circulating Medium is the Medium by which Sales or Circulation are effected : and, from what has just been said, the Circulating Medium is simply Money and Credit in all its forms and varieties.

## On the Meaning of Currency.

18. There is, however, somewhat more difficulty about the meaning of the word Currency, which is always used as synonymous with Circulating Medium : it is originally a term of Mercantile and Constitutional Law.

The following is the meaning of the words 'Current' and ' Currency' in English Law :-

It is a general rule of English Law that a person cannot transmit to another any better title to a thing than he possesses himself. It is also a rule of law, that if a person has lost a thing, or has it stolen from him, he does not thereby lose his Right or Property in it. Consequently he can not only recover it from the finder or thief himself, but even if the finder or thief has sold it to some one else, who has given a full price for it, and buys it quite honestly and without knowing that it was not the property of the seller. The only exception to this was, if the finder or thief sold the goods in 'market overt.' If the goods were bought in 'market overt,' the buyer might retain them against the true owner even if they were stolen.

But to this rule of English law Money was always an exception. If the true owner of Money finds it in the hands of the thief, he can recover it : but if the thief or finder has purchased goods in a shop with it ; and the shopkeeper takes it honestly in the way of business, and without knowing that it has been stolen, he may retain it against the true owner from whom it has been stolen, even if he can identify it. That is, the Property in it passes by delivery.

It is this peculiarity in the law affecting the Property in Money which passes by delivery which is denoted by the word

## ' Currency.'

And when the representatives and substitutes for Money, such as Bank Notes, Bills of Exchange, Cheques, and other Securities for Money, came into use, the Lex Mercatoria, or custom of merchants, applied the same doctrine or principle of Currency to them. They were treated like Money in so far as this, that the Property in them passed like the Property in Money. Thus, if they were stolen, the true owner might recover them if he found them in the possession of the thief: but if the finder or thief had passed them away for value in the usual course of business to an innocent holder, that innocent holder acquired the Property in them, and might retain them against the true owner, and enforce payment of them from all the parties liable. Thus Bills of Exchange, Bank Notes, Cheques,
and all other Securities for Money were assimilated to Money in this important respect, that, even though stolen, when they had once been passed away ' in Currency' the Property in them belonged to the person who had innocently purchased them : and, as Lord Mansfield said, no action would lie for them after they had once been paid away 'in Currency.'

It is thus seen that in strict law the word Curreney can only be applied to those Rights which are recorded on some material. An abstract Right cannot be lost, mislaid, stolen, and passed away in commerce. For a Right to be Currency in strict law it must be recorded on some material, so as to be capable of being carried in the hand, or put away in a drawer, or dropped in the street, and stolen from the drawer, or from a man's pocket, and carried off by the finder or thief, and sold like a piece of goods.

So far, then, as regards law, there is no difficulty : the meaning of the word is perfectly plain. But if the word Currency is used to denote a certain class of Economic Quantities, synonymously with Circulating Medium, a difficulty arises : because there is an immense mass of Credit which has produced exchanges, and is therefore Circulating Medium, which is not recorded on any material substance, so that it can be lost or stolen, and passed away by manual delivery.

Thus the gigantic mass of Bank Credits and Book Debts of traders have effected a sale or circulation of commodities, and therefore they are all Circulating Medium ; but they are not Currency in a legal sense, because they cannot be mislaid, or lost, or stolen, and passed away by manual delivery. But though these Book Credits are not Currency in point of law, they must be included in that word when used as a scientific term in Economics, synonymous with Circulating Medium, because these Rights of action are exactly the same in their nature and effects, whether they are resorded on paper or not. This truth was well expressed by the Marquis of Titchfield in the House of Commons, in speaking of various forms of Credit used as substitutes for money:-' When it was considered to
how great an extent these contrivances had been practised in the various modes of Verbal, Book, and Circulating Credits, it was easy to see that the country had received a great addition to its Currency. This addition to the Currency would of course have the same effect as if gold had been increased from the mines.'
19. Adopting, then, this definition, we may enumerate the different species of Currency, or Circulating Medium, as follows :-
I. Coined Money : Gold, Silver, and Copper.
2. The Paper Currency : Bills and Notes in all their varieties.
3. Simple Debts of all kinds not recorded on circulating paper; such as Credits in bankers' books, called Deposits; Book debts of traders ; and private Debts between individuals.

All these denote that a transfer has taken place, and are a Title to future payment. It is true that some species are more eligible and secure than others, but that does not alter their nature : they all represent the same fundamental idea-Debt. Hence it follows that the amount of Currency, or Circulating Medium, in any country, is the total of all the Debts due to every individual in it-that is, all the Money and Credit in it.

## On Price, Discount, and Interest.

20. When any Economic Quantity is exchanged for another, each is termed the Value of the other. But when one of the Quantities exchanged is Money or Credit, the sum of Money or Credit receives a peculiar name : it is termed Price. Price is therefore always the Value of anything expressed in Money or Credit. Now, as the Value of Money or Credit is the greater as more of any commodity can be obtained for it: or if the quantity of the commodity be taken as fixed, the Value of Money is greater as less Money is given for the commodity, it follows that the Value of Money varies inversely as Price.

Debts or Credits are commodities, and, like other commodities, they must be divided into certain units for the convenience of sale. Coals are sold by the ton : other things by the pound : others by the ounce. The unit of Debt is the Right to demand rool. to be paid one year hence. The sum of Money or Credit paid to buy this unit is its Price : and the smaller the Price given the greater is the Value of Money. But in the commerce of Debts it is not usual to estimate the Value of Money by the Price of the Debt. The Price of the Debt is of course less than the amount of it : and the difference between the Price of the Debt and its amount is the Profit made by buying it. This Profit is called Discount. And it is clear that, as the Price of the Debt decreases, or increases, the Discount or Profit increases or decreases. In the commerce of Debts it is always usual to estimate the Value of Money by the Discount or Profit it yields. Hence, in this latter case the Value of Money varies directly as Discount.

Hence it must be observed that in commerce the expression 'Value of Money' has two meanings, according as it is applied to buying commodities or debts: in the former case it means the quantity of the commodity bought, in the latter it means the profit made by buying the debt ; and accordingly we have this rule-

The Value of Money varies inversely as Price, and directly as Discount.

To discount a bill at 5 per cent. means to give a price for the debt in the proportion of $95 l$. for every $100 l$. of its amount, payable one year hence.

When a person advances Money to another, and agrees to defer receiving the profit till the end of the period, the profit is termed Interest. If he lends rool. for a year at 5 per cent. interest, he pays down 100l., and buys the Right to demand 105 l. at the end of the year : and the $5 l$. is the Interest.

When the profit is retained at the time of the advance it is termed Discount. In this method the lender advances $95 l$., and
buys the Right to demand rool. at the end of the year. This is the method always adopted by bankers in making advances.

It is clear that Discount is more profitable than Interest, because in the former case the lender gains $5 \%$. on the advance of $95 \%$., in the latter case on the advance of $100 \mathrm{l} .:$ and besides that he has the profit to trade with at once, instead of waiting till the end of the year for it.

The Rate of Interest or Discount is the amount of Interest or Discount made in some given time, as a year.

## On Production and Consumption ; or Supply and Demand.

21. The terms Production and Consumption were invented by the first school of Economists, and must always be taken together.

Production comes from the Latin word Producere, which means to draw forth and place on a given spot : or to offer for sale. Thus Terence says-

> Pretium sperans illico Producit: vend.t.

> Hoping for a good price offers her there for sale: sells her.

To Produce, then, in Economics means to bring any commodity into the market and offer it for sale. The Producer, in the language of commerce, is the person who offers anything for sale.

The first school of Economists restricted the term Wealth to the material products of the earth, and they expressly defined Production to mean the obtaining the raw produce from the earth and bringing it into the market for sale.

Consumption (Consommation) was used by the same school of Economists to mean finally purchasing a commodity, and taking it out of the market for use and enjoyment. It is derived from the French word Consommer, which comes from the Latin Consummare, to complete or finish. Consommation meant the completion of an exchange. When one person, for
instance, exchanged a picture for a statue with another person, each obtained a satisfaction ; and this the first school of Economists called a complete exchange. Hence the Consumer was simply the Purchaser or the Customer. In the language of commerce the Consumer means the Buyer.

Thus the expression Production and Consumption means simply Exchange.

So long as the term Wealth was restricted to mean the material products of the earth only, there was no awkwardness in the terms Production and Consumption. But when the second school of Economists treated Labour as a marketable commodity, or Wealth, and when the third School of Economists treat Rights as marketable commodities or Wealth, very considerable awkwardness arises. For even though it is expressly explained that Production means nothing but offering for sale, and that Consumption means nothing but buying or purchasing, it is very awkward to speak of the Production and Consumption of Labour and Rights.

Under these circumstances it is better to resort to words of wider import : and these we have in the words supply and Demand. Production, or the quantity produced and offered for sale, is the Supply; the quantity bought or consumed is the Demand. It is quite usual to speak of the Supply and Demand of Labour, or the Supply and Demand of Bills of Exchange or Debts. And the terms Supply and Demand together constitute Exchange.

Hence while the terms Production and Consumption were never intended to apply to anything but the material products of the earth, the terms Supply and Demand apply to the exchanges of all the three kinds of exchangeable quantities.

## On the Three Kinds of Production.

22. Production being explained to mean placing a commodity in the market and offering it for sale, there are various
kinds of operations which are necessary to and are included in the term Production-
I. Some persons obtain the raw produce from the earth, such as tillers of the ground, miners, hunters, fishers, \&c., and bring it into commerce : these are termed Agricultural Producers.
23. Other persons transform this raw produce by an infinity of processes, and render it fit for human use : these are termed Manufacturing Producers.
24. Other persons transport the commodity from places where it is cheap and less required to other places where it is dear and more required : these are termed Commercial Producers.

All these various kinds of Producers may be necessary to place any required commodity in the market where it is ultimately offered for Consumption or final purchase.

## On Cost of Production.

23. Production being the placing any commodity in the market and offering it for sale, the Cost of Production is the sum actually expended in placing it in the market where it is offered for sale.

## On Profit.

24. The Cost of Production being the sum actually expended in placing any commodity in the market where it is offered for sale : the sum for which it is sold is its Value : and the Difference between the Cost of Production and the Value is termed Profit.

The Value may exceed or fall short of the Cost of Production : when the Value exceeds the Cost of Production, the Profit is Positive, and is termed a Gain ; when it falls short of the Cost of Production the Profit is Negative, and is termed a Ioss.

The Rate of Profit is the amount of Profit made in some given time, as a year.

## On Productive and Unproductive Labour.

25. The term Productive Labour was used by the first school of Economists to denote Labour which produced a Profit after defraying the Cost of Production ; and to use a thing Productively meant to use it so as to produce a profit.

Unproductive Labour was Labour which produced no Profit after defraying the Cost of Production.

## On Rent and Hire.

26. Exchanges in commerce are of two sorts : one where the absolute Property in the thing is purchased, or the Right to it for ever : the other where only the Right to use it for a limited period is purchased.

When the Right or Property in the thing for ever is purchased, the sum given is called its Price ; when the Right only to use it for a limited period is bought, the sum given is called Rent or Hire.

In general the word Rent is used when the sum given is made in a series of payments for continuous use ; the word Hire is generally used when the sum is given in a single payment.

Thus a person may purchase the use of a farm, or a house, or a die, or a Copyright, or a Patent, or a Telegraph wire, or a Frame, for a certain time and make a series of payments for their use : these payments are always called Rent ; or rather the Right to demand them is the Rent. Formerly the Right to demand a series of payments for the loan of Money was also called Rent : this name is not usually applied in English now to such payments, but it continues in use in French : thus the French Funds are called Rentes; and a fundholder is called a Rentier.

When the sum is given in a single payment it is usually called Hire : thus a person hires a horse for the day : or hires a cab : or a porter.

There is, however, no absolute rule on the subject : if horses and carriages were hired by the year, the sum paid would be called Hire and not Rent : and the sum paid for lands and houses is called Rent, even though there be only one payment made.

## On Capital.

27. Any Economic Quantity whatever may be used in two different ways: (I) It may be used for personal enjoyment; (z) It may be used for the purpose of profit, or it may be traded with. When any Economic Quantity is traded with, or used so as to produce a profit, or, in the language of Economics, used productively, it is termed Capital.

Thus Senior says, 'Economists are agreed that whatever gives a profit is properly termed Capital.' And De Fontenay says, 'Wherever there is a Revenue you perceive Capital.' The definition of Capital is, therefore-

Capital is any Economic Quantity used for the purpose of Proft.
I. Any material thing may be used as Capital. Money spent upon household requirements or in gratifying personal tastes is not Capital. But if it is lent out at interest : or expended in buying goods with the intention of selling them again with a profit, then such money is used as Capital : and the goods are also Capital, because they are intended to be sold with a profit. So land let out for the purpose of profit is Capital.
2. All modern Economists-Smith, Say, Senior, Mill-class personal abilities, skill, energy, and character as Capital, because they may be used so as to produce a profit as well as any material chattel.

If a man digs in his garden for his own amusement; or if he sings, or acts, or gives lectures to his friends gratuitously, such Labour is not Capital.

But if he sells his Labour in any capacity for money-such as a ploughman, an artisan, a physician, an engineer, an advocate, or in any other way-such Labour is Capital. Any exertion of human abilities in any way which is paid for is Labour : and a person can make an income by the exertion of his personal abilities, which is mcasurable and taxable, just as if he made an income by selling goods. Such Capital is called by J. B. Say Immaterial Capital.

But a man may use his personal character, skill, energy, and probity for the purpose of profit in another way besides the direct exchange of his Labour for money.

He may use them for the purpose of buying goods, materials, and by giving his Promise to pay at a future time, instead of actual payment in money, with the intention of selling those goods with a profit. In popular language, this Purchasing Power of Character is called Credit. And a trader makes a profit by trading with his Credit precisely in the same way as if he traded with Money.

A merchant's general Credit, or Purchasing Power, does not come into Economics until he actually makes some purchase with it, and then he gives his Promise to pay for the goods, instead of actual Money. It is this Promise to pay, this Debt or Right to demand payment, which is the Economic Quantity called Credit ; and it may be bought and sold like any material chattel.
3. So any other Economic Quantity or Right may be used as Capital. If an author writes a successful work, the Copyright of it is Capital to him : and if a publisher buys the copyright it is Capital to him. There is a class of traders whose business it is to buy and sell Rights of various kinds-the Funds, Obligations, and Shares in Commercial Companies. They keep a stock of this Property on hand, just as other traders keep a stock of material goods.

It is, therefore, to be observed that there is no such thing as absolute Capital: it entirely depends upon the way in which a thing is used. whether it is Capital or not. As Mill says, whether
a thing is Capital or not does not depend upon its own nature, but upon the mind of its owner. A piece of money may be used as Capital in one exchange, and not as Capital in the next exchange, if in the first it is meant to be replaced with a profit, and in the next it is used for personal enjoyment.

## Capital may increase in two ways.

28. Capital may increase in two distinct ways-
29. By actual increase of quantity : flocks and herds, and all fruits of the earth, increase by adding to their number or quantity.
30. By exchange : that is, by exchanging something which has a low value in a place for something which has a higher value : that is, by commerce.

Money becomes Capital, or produces a profit, by the second of these methods. It is exchanged for some goods or labour, the produce of which may be sold or exchanged again for a greater sum than they cost.

Credit is used as Capital precisely in the same way : namely, by buying goods which may sell for more than they cost, so that, after discharging the Debt incurred by their purchase, there may be a profit over.

Suppose a merchant buys goods with iool. in money, and sells the goods for $125 l$. ; then he is better off at the end of the operation by $25 l$. than at the beginning.

Suppose that he has no Money and no Credit ; he can buy no goods and make no profit.

Suppose, however, that the owner of the goods, trusting to his character, probity, and skill, sells him the goods in exchange for his Promise to pay at a future time. As the payment is deferred, and there is some risk, the merchant must pay a higher price in Credit than in Money.

Suppose he has to pay rojl. in Credit. Then, as before, he sells the goods for $125 l$. He has to discharge the Debt of $105 l$.; and after paying that he has a Profit of 202 . over. That is, he
is 201 . better off at the end of the operation than he was at the beginning.

Now, by the cash operation he is better off by $25 l$., and by the Credit operation he is better off by 20l., than he was at the beginning. It is true he does not make so great a profit by Credit as by Cash. But yet he has made a profit by his Credit which he could not have made without it. Hence by the very definition his Credit has been Capital to him, and has produced exactly the same circulation of commodities that Cash would have done. Hence we see that Credit is Productive Capital in exactly the same way and in the same sense that Money is.

## On Fixed and Floating Capital.

29. It is, then, distinctly to be understood that there is no such thing as absolute Capital. It depends entirely upon the intention and method of use whether a thing is Capital or not.

But Capital itself may be used in two different ways so'as to produce a profit-
r. The Capitalist may retain it in his own possession, and make a continuous series of profits by its use ; in this case it is called rixed Capital.
2. The Capitalist may part with it entirely, and replace the entire value of the Capital with the profit in one operation : in this case it is called Floating Capital.

It is clearly to be understood that it is according to the intention of the person who produces an article, and the purpose for which it is used, that it receives either of these names. The same article may be Floating Capital in the hands of one man, and Fixed Capital in the hands of the next possessor, if the first produces it for the purpose of selling it, and the second purchases it for the purpose of deriving an income from its use.

This distinction is often overlooked, and the term Fixed Capital is applied to articles of a certain nature, and Floating Capital to articles of another nature. Thus Smith enumerates four species of Fixed Capital : ( 1 ) useful machines and instru-
ments of trade ; (2) Buildings used in all sorts of trades ; (3) Improvements of land ; (4) the acquired and useful abilities of the members of the Society.

This enumeration is very imperfect, because it omits that stupendous mass of Incorporeal Property which has so enormously increased in recent times.

Thus if a man invests money in the Funds, or in Shares in a Commercial Company, or in purchasing the Goodwill of a business, or the Practice of a profession, or if a publisher buys the Copyright of a work, all these are Fixed Capital to him.

Smith also enumerates four species of Floating Capital : (1) the Money by means of which the other three are circulated and distributed to their proper consumers ; (2) the stock of provisions in the hands of various dealers; (3) the materials in the hands of different workpeople to be made up ; (4) the same materials when made up into finished products and ready for sale.

Under the term Money Smith includes Bank Notes, Bills of Exchange, \&c., which are Credit, and therefore he includes Credit under the term Capital.

Now, it is to be observed that houses and lands are by no means invariably Fixed Capital. It is quite common for speculators to buy up land or to build houses for the express purpose of selling them again. In the hands of these speculators the lands and houses are Floating Capital. There are many manufactories of machinery ; the machines are made there for the purpose of being sold: in the hands of such persons these machines are Floating Capital; in the hands of the persons who retain these machines in their own possession, and use them in their business, they are Fixed Capital.

To a person who buys the Funds or Shares in a Commercial Company as an investment to produce him an income, they are Fixed Capital. But there is a class of traders who buy and sell these kinds of property like the goods in a shop. To these persons they are Floating Capital.

## On Payment and Satisfaction.

30. The word Payment in law and commerce means anything whatever which is taken in exchange for something else.

It comes from the Italian pagare, from the Latin pacare, to appease, and it means anything whatever which appeases the claim or demand of any other person. Because when any person has delivered or done anything for another, unless it is neeant to be a donation, he has a claim for an equivalent : but at the same time he has the right to consider anything he pleases as an equivalent.

Thus, when two persons exchange material products, each is Payment for the other : because each satisfies the claim of the other for an equivalent. It is sometimes supposed that when money is given in exchange for goods, it is only the money which is the payment. But this is a great error. The money is the payment for the goods; but the goods are equally payment for the money. So when money is paid in wages, the money is the payment for the work, and the work is the payment for the money.

So when a merchant takes a bill at three months in exchange for goods, the bill is payment for the goods; it appeases the claim of the merchant : he has got what he voluntarily agreed to take in exchange for the goods. When the bill becomes due the debtor has to pay the bill, or appease the claim which the owner of the bill has for the money.

But it by no means follows that Payment is the final closing of the transaction. The only legal word which denotes the final closing of the transaction is Satisfaction : if a bill is taken in exchange for goods, it is Payment; but it is not Satisfaction until the bill itself is paid.

And Economists go further : they say that Money itself is only a higher order of bill, and that though giving money is payment, it is not Satisfaction until the money is exchanged away for something that is desired. Thus, though a shoemaker may be paid when he has got money for his shoes, yet he has not
got a Satisfaction until he has got bread, or meat, or wine, or anything else which he desires.

## On the Meaning of Persona and Res in Roman Law.

31. It will be very useful to explain the meaning of the words Persona and Res in Roman Law.

Persona means any single person or any society of persons who can enjoy and exercise Rights. Thus in a partnership each member is a persona: but also the partnership is a persona, quite distinct from its individual members. The consequence is that each member of the society can have dealings with, and buy and sell with, the society, just as with any other individual.

Every joint stock company is a persona, and when the individual members pay their money as capital to the company, the property in it is gone from them and vests in the company ; and what they receive in return for it is a Right to participate in the future profits of the company in the proportion in which they have contributed capital.

An important example of this nature is the State. The State is a persona quite independent of its individual citizens. Private individuals can lend money to the State, and receive in return the Right to receive a series of payments. These Rights are called the Funds.

And this is the meaning of the parson of a parish. He is the persona who enjoys the right to certain compensation or reward for his services ; and this right to these ecclesiastical dues is called a Benefice.

And as a persona is any body, single or corporate, which can enjoy a right, so Res is anything whatever which can be the subject of a Right. Thus not only material things are termed Res, but also human actions or services. If I hire a man to do some service for me, I have the right to demand that labour or service from him, and therefore it is a Res.

So also if I have the right to demand a sum of money from some person in consequence of having lent him money or sold him goods on credit, that Right is termed a Res; and so is every other right to future payment or profit.

It is the exchange of these different kinds of Rights which constitute Commerce in its widest extent, or the Science of Economics, which is the subject-matter of this work.

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## CHAPTER II.

## on value.

1. Economic Quantities are, as we have seen, of three distinct orders, and these can be exchanged in six different ways. The six distinct kinds of exchange constitute the science of commerce in its widest extent, or the science of Economics. We have now to investigate the Laws which govern the relations of these Exchangeable Quantities, or the Theory of Value.

The complete Theory of Value comprises-

1. The Definition of Value.
2. The Origin, Source, or Cause of Value.
3. The General Law of Value : or the General Equation of Economics.

## The Definition of value.

2. Value in its original sense is a quality, or desire, of the mind : it means esteem or estimation: as we speak of a highly valued friend. But such Value is not an Economical phenomenon. To bring Value into Economics it must be manifested in some tangible form : as when a person manifests his desire, estimation, or Value for something by giving something in exchange for it to acquire possession of it.

But as one person cannot gain possession of what belongs to another person without giving him something in exchange for it which he desires, esteems, or values, it is clear that for an exchange to take place requires the concurrence of two minds. If a person brought a cargo of wine to a nation of teetotallers,
there would be no desire, or Demand, for such a product : no one would buy it ; and such a cargo would have no value among such a people. So a cargo of tobacco would have no Value among a nation of non-smokers; or a cargo of beef among a nation of vegetarians. However much a person may wish to sell his product, if no one will buy it, it has no Value. For an exchange to take place, so that there may be a phenomenon of Value, there must be the reciprocal desire or Demand of two persons, each for the product of the other.

When, however, two persons agree to exchange their respective products, each product may be considered as the Measure of the Desire of its possessor to obtain the product of the other. And when the two persons have agreed upon the Quantities of their respective products which are to be exchanged, the two products are said to be of equal value : and each product is said to be of the Value of the other.

Thus let A and b be any two Economic Quantities which are exchanged at any time : then we may say-

## A valet B ,

or
or $A$ is of the Value of $B$,

$$
\mathrm{A}=\mathrm{B} .
$$

Then $B$ is the Value of $A$ in terms of $B:$ and $A$ is the Value of $B$ in terms of $A$.

Hence it is clear that Value is a Ratio, or an Equation. Like distance, or an equation, it necessarily requires two objects. The Value of a thing is always something external to itself. It is impossible to say that any Quantity has Value without implying that it can be exchanged for something. Everything it can be exchanged for is its Value in that commodity. Hence any Economic Quantity has as many Values as things it can be exchanged for: and if it can be exchanged for nothing it has no Value.
3. Hence a single object cannot have Value. We cannot speak of absolute or intrinsic distance or equality. If it is said
that an object is distant or equal, we must ask, Distant from what ? or equal to what? So if it is said that an object has Value, we must ask, Value in what? We can no more say that a Quantity is worth, than we can say that London is distant, or that five pounds is equal.

But any Economic Quantity may have Value in terms of any of the others.

The Value of the money in the pockets of the public is the various products and services it can command. The Value of the goods in the merchants' and traders' warehouses is the money in the pockets of the public. The Value of a workman's labour is the wages he can earn.

The Value of an Incorporeal Right or Property is the thing which may be demanded. The Value of a 5 l. note is five sovereigns. The Value of a Postage Stamp is the carriage of a letter. The Value of a Promise or Pledge to cut a man's hair is the cutting of his hair. The Value of a Railway Ticket is the journey. The Value of an Order to see the play is seeing the play.

These several Rights, then, have Value, and they may be bought and sold like any material chattels : hence they are called 'goods and chattels,' ' vendible commodities.'
4. Price being the Value of anything in Money or Credit, if Money or Credit be excessively abundant the Prices of all things will rise : but they will still preserve the same values among themselves. If a loaf of bread and a pound of meat each cost sixpence : and if, in consequence of the excessive abundance of Money or Credit, they each rise to a shilling, the pound of meat is still of the Value of a loaf of bread. Hence there may be a general rise or a general fall of prices.

But there can be no such thing as a general rise or fall of Values. Everything can no more rise or fall with respect to everything else than, as Mill says, a dozen runners can each outrun all the rest: or a hundred trees can all overtop one another : to suppose that all things could rise relatively to each
other would be to realise Pat's idea of society, where every man is as good as his neighbour and a great deal better too.

## On the Error of the Expression Intrinsic Value.

5. We must now say a few words about an expression which has been the source of immense confusion in Economics, and has especially obscured the Theory of Credit.

The Value of a thing is something else for which it can be exchanged : it is therefore always something external to itself. Nevertheless it is very common to speak of Intrinsic Value. Now intrinsic means internal, something inside the quantity. The least reflection will show that to define the Value of a thing to be something external to it, and then to speak of Intrinsic Value, are self-contradictory and inconsistent ideas.

The confusion arose in this way :-In modern times, when men began to think of things of Value, they began to call the Quality which made them desirable their Value. So long ago as i696 an able writer-Barbon-pointed out the error of speaking of Intrinsic Value ; and that the virtue or utility of a thing is totally different from its Value or Price : this is confounding an Intrinsic Quality with an External Relation. Some Economists term the utility of a thing its Value in use, and its Price its Value in exchange. But in Economics we have nothing to do with Value in use, but only with Value in exchange.

Smith, however, is one of the principal authors of this confusion. In chap. v. b. i. he begins by defining the Value of a thing to be the thing for which it can be exchanged : and then he suddenly changes his idea of Value to be the Quantity of Labour expended in obtaining the thing itself. Hence the Intrinsic Value of a thing came to be considered as the Quantity of Labour embodied as it were in it. And from this it came to be asserted that Labour is the cause of all Value : and Value was called Intrinsic.

Thus it is very often said that Money has Intrinsic Value;
and that a Bank Note or Bill of Exchange is only the representative of Value.

It is easily seen, however, that these ideas are erroneous. Money no doubt is the produce of Labour, but Smith himself says that if it were not exchangeable it would have no Value. How, then, can its Value be Intrinsic? How can anything have Intrinsic Value unless it has the things it will exchange for inside itself? Can anyone perceive any lands, or houses, or corn, or books, inside a sovereign ? If they cannot, the expression Intrinsic Value is manifestly absurd. Money and a Bank Note have Value for exactly the same reason ; because they are exchangeable. A Bank Note has Value because it can be exchanged for Money and other things : Money has Value because it can be exchanged for other things. When a Bank Note and Money can be exchanged they have Value; when they cannot be exchanged they have no Value.

The expression Intrinsic Value is so common that persons are apt to overlook its incongruity of idea : but if we use words of similar import, whose meaning has not been so corrupted, the absurdity is apparent at once. Who ever heard of Intrinsic Distance, or Intrinsic Equality? But these expressions are not more absurd than Intrinsic Value. Who ever heard of the Intrinsic Distance of St. Paul's, or the Intrinsic Equality of five? These considerations show how necessary it is to avoid such misleading expressions as Intrinsic Value.

## On Diminution in Value and Depreciation.

6. These two expressions are often used indiscriminately, but they are essentially distinct. An alteration in the Value of a commodity means that the quantity of some other commodity with which it is compared has undergone a change. Depreciation means that it is not of the Value it professes to be. Alteration in Value is used in reference to some other commodity, Depreciation in reference to itself. If at any time gold was fifteen times as valuable as silver, and if, in consequence of the
greatly increased quantity of silver, gold became twenty times as valuable as silver, silver would be said to have fallen in value with respect to gold. But if the coinage does not contain so much bullion as it professes to do, it is Depreciated : or if a Bank Note which professes to be of the value of $5 l$. will only purchase 4l. ios., it is Depreciated.

It is very necessary to observe these distinctions in all discussions regarding the Value of coins which retain the same name during a long series of ages. In the time of William I. the pound really meant a pound weight of silver bullion. Since then silver has greatly increased in quantity, and other things are used as money as well as silver. In consequence of this silver has greatly diminished in Value : but in addition to that the pound at the present day is only about one-third of the pound weight of silver ; so that the Coinage is greatly Depreciated. In consequence of these combined causes it is often said that the modern shilling is only of the 30 th part of its value in the time of William the Conqueror.

## On the Origin, Source, or Cause of Value.

7. We have now to determine what is the Cause or Source of value. There are a great variety of things of different natures which have Value. We must search for some single cause which is common to them all: which being present, Value is present : which when it increases, Value increases : which when it decreases, Value decreases : and which being absent, Value is absent.

Now, as we have defined the Value of a thing to be any other thing for which it is exchanged, it is evident that there must always be two parties to Economic Value. As exchanges are voluntary, each of the two parties must have some product, and each must desire or Demand the product of the other. Hence Reciprocal Demand is the Cause of Value.

It is quite clear that Demand is the true Source or Cause of Value. Value is not a Quality of an object, but an affection of
the mind. The sole Source or Cause of Value is Biuman Desire. When there is a Demand for things they have Value : when the Demand increases (the Supply being supposed the same) the Value increases: when the Demand decreases, the Value decreases: and when the Demand altogether ceases, the Value is altogether gone.

The whole body of ancient writers made Demand the sole Cause of Value. In modern times Boisguillebert, one of the earliest writers on Economics, says, ' Consommation (Demand) is the principle of all Wealth.' Hume says, 'Our passions (desires or Demand) are the only causes of Labour.' The Italian Economists also are unanimous upon this point. Genovesi says, 'Value is the child of Demand.'

The first school of Economists made all Value arise from Demand : and they showed that things which remain without Demand (Consommation) are without Value.
8. This is so obvious that it might seem superfluous to dwell upon it ; but, unfortunately, it is often asserted that Labour is the sole Cause of all Value. Anyone who reffects upon this assertion must see its utter fallacy. In the first place there are multitudes of things which have Value upon which no Labour was ever bestowed: in the next place, however much Labour has been bestowed upon a thing, if no one will buy it-that is, if there is no Demand for it-it has no Value.

The doctrine that Labour is the sole cause of all Value, and that all Wealth is produced from the earth, has had the most prejudicial effect on the science of Economics: whereas when we adopt Exchangeability as the sole essence and principle of Value and Wealth, the whole subject becomes clear and simple.

On the General Law of Value : or the General Equation of
Economics.
9. We have now to determine the General Law of Value : or the General Equation of Economics-that is, to discover a
single General Law which governs the exchangeable relations of all Economic Quantities, whatever their nature may be, at all times, and under all circumstances.

Let A and b be any two Economic Quantities, of any form whatever; then suppose that A remains constant while B varies; then $B$, or the value of A, will vary from four causes.

It will Increase-

1. From a Diminution in Quantity.
2. From an Increase of Demand.

It will Decrease-

1. From an Increase of Quantity.
2. From a Diminution of Demand.

Now, as the variations in Value of the other Quantity are influenced by exactly the same four causes, it is quite clear that the variations of both Quantities will be governed by Eight independent causes: and if these be connected in the form of an Algebraical Equation, that will manifestly be the true General Equation of Economics.

This is the full expression of what is usually called the Law of Supply and Demand. It means that no change can take place in the Exchangeable relations of any two Economic Quantities, unless there is some change in the Intensity of Demand or the Limitation of Supply of one or both of the two Quantities.

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## CHAPTER III.

## ON THE COINAGE.

## On the Meaning of Bullion and Coins.

1. All civilised nations use Gold and Silver for the purpose of Money : but these metals in a pure state are too soft to stand the wear and tear of daily use. Some other metal, termed Alloy, is mixed with them to harden them ; and by a chemical law the mixed metal is harder than either of the others in a pure state.

Gold and Silver in the mass are termed Bullion : but as the laws of all countries which use gold and silver as money define the quantity of alloy which is to be mixed with the pure metal, we shall use the word Bullion to mean gold and silver in the mass mixed with the legal quantity of alloy, so as to be fit to be made into money.

By the present law of England, standard Gold Bullion is composed of 22 carats of pure gold and 2 carats of alloy: standard Silver Bullion is composed of II Oz. 2 dwts. of pure silver and I8 dwts. of alloy.
2. Bullion is further divided into pieces of a certain weight, defined by law : and a certain stamp is placed upon them as a public certificate that they are of the weight and fineness prescribed by law. They are further called by a certain name, and are then intended to be used for the purposes of commerce
without further examınation. Such pieces of Bullion are called

## Coins.

This stamp or certificate in no way affects the Value of the Coin or the quantity of things it will exchange for. Its only object is to save the trouble of weighing and assaying the metal in commercial transactions. Nor can the Name of a Coin affect its Value : Values are estimated in the number of these Coins; but it is necessarily implied in the bargain that these Coins contain a definite quantity of Bullion of the legal fineness.

## On the Meaning of the Mint Price and Market Price of Gold and Silver.

3. As the very purpose of coining is to certify that the pieces of Bullion are of a certain definite weight and fineness, it is evident that a fixed quantity of Bullion, as a pound weight, must be divided into a fixed number of Coins.

The Number of Coins into which a given quantity of Bullion is divided by law, is called the Mrint Price of that quantity of Bullion.

By the law at present in force, forty pounds' weight of standard gold bullion are divided into 1,869 coins, called Pounds or Sovereigns ; hence one pound weight of bullion is coined into $46 l$. i4s. 6 d . : or, as the value of gold is estimated by the ounce, one ounce of gold bullion is coined into $3 l .175$. $10 \frac{1}{2} d$. , which is called the mint Price of Gold.

The legal weight of the Pound or Sovereign is 5 dwts. $3^{\frac{171}{6} \frac{1}{2}}$ grs., containing $I^{1} 3_{6} \frac{1}{23}$ grs. of fine gold. Sovereigns which fall below 5 dwts. $2 \frac{3}{4}$ grs., and Half-Sovereigns which fall below 2 dwts. $13 \frac{1}{2}$ grs., cease to be legal tender.
4. It is clear that the Mint Price of Bullion is a fixed quantity; it can by no possibility vary, unless the law orders a different number of Coins to be coined out of the same quantity of Bullion.

In the time of William the Conqueror the pound weight of Silver Bullion was coined into 240 pence: hence the Mint Price of Silver was $1 l$. : but in the time of Elizabeth the pound weight of Silver was coined into 744 pence ; or the ounce of Silver was coined into 62 pence : hence the Mint Price of Silver was 3 l. $2 s$. per pound, or $5 s .2 d$. per ounce.

To alter the Mint Price of Bullion is merely an expression which means an alteration in the legal weight of the Coinage.
5. When Coins have been for some time in circulation, they necessarily lose some part of their weight from wear and tear. But people are so accustomed to attach a certain Value to the sight of a certain Coin that they do not inquire too curiously whether it is of the legal weight or not. So that Coins may pass for some time at their nominal value in exchange for commodities and services after they have lost much of their legal weight. As Shakespeare says-

> 'Tween man and man they weigh not every stamp; Though light, take pieces for the figure's sake.

But when Coins are taken in exchange for Bullion the case is different : for then the Coins are always exchanged weight for weight with Bullion. So that if the Coins have lost their legal weight a greater number of them must be given for a given amount of Bullion than if they were of full weight. Supposing that the Mint Price of Gold is $3 l .17 s$. $10 \frac{1}{2} d$. per ounce, or that an ounce of Gold is divided into that number of Coins, then if they had lost a good deal of their weight from any cause, it might take $4 l .5 s$. to be equal in weight to an ounce of Gold.

The quantity of the Current Coin which is equal in weight to a given quantity of Bullion is called the market Price of that amount of Bullion, and when the Coins are depreciated more of them must be given to purchase any amount of Bullion than if they were of full weight. The Market Price will then be apparently higher than the Mint Price: and this is called a Rise of the Market Price of Bullion above its Mint Price : and it
is quite clear that this is due to the Depreciation of the Coinage. Hence we have this fundamental law of the Coinage-

When the Market Price of Bullion rises above the Mint Price, the Excess is the Proof and the Measure of the Depreciation of the Coinage.

## On Gresham's Law of the Coinage.

6. Aristophanes first noticed the fact at Athens that when a debased Coinage was issued along with a good Coinage, the good Coins all disappeared from circulation, and the debased ones alone remained.

This fact, which has been invariably observed in all countries, was long the puzzle of financiers and statesmen. Formerly the Coinage in this country used to suffer very much from clipping and other bad practices. All efforts to amend it by issuing good coin from the Mint were found to be unavailing, as the good coin invariably disappeared, and the bad coin alone remained in circulation. Sir Thomas Gresham first explained the cause; hence we have called it Gresham's Law of the Coinage.

It is a fundamental Law of the Coinage that bad money drives out good money from circulation : or, as it is expressed in an old pamphlet-
' When two sorts of Coins are current in the same nation, of like Value by denomination, but not intrinsically, that which has the least Value will be current, and the other as much as possible hoarded,' or exported.

The reason of this is very simple. Suppose that full-weighted coins and depreciated coins are allowed to circulate together: one of two effects must inevitably follow. Either those persons who have commodities to sell will make a difference in their nominal price, according as they are paid in good or in light coin : that is, the light coin will be at a discount as compared with the good coin; or if there be a law to prevent this, and to force both to pass at the same nominal value, everyone will
endeavour to discharge his debt at the least possible expense. He will always try to pay his debts in the light coin. As the full-weighted coins are forced down below their real value in this country, bullion-dealers immediately collect all they can and melt them down, or export them to foreign countries, where they will pass at their real value. Thus the good coins quickly disappear from circulation.

## What is a Pound?

7. We must now explain how a certain weight of Gold Bullion came in the present day to be called a Pound.

The original measure of value in England, France, and Italy was formerly the pound weight of Silver Bullion. No coin of this weight was ever struck, tuit the pound weight of Silver Bullion was coined into 240 pieces, called Pence. Twelve of these pence were called a Shilling, or solidus: and therefore twenty shillings, or solidi, made a Pound.

Now let lb. denote a pound weight of Silver in the form of Bullion, and let $l$. denote the same weight of Bullion in the form of Coin ; then we have -

$$
240 \text { pence }=20 \text { shillings }=1 l .=1 \mathrm{lb} \text {. }
$$

Now if the pound weight of Silver were cut into more than 240 pieces, that greater number of pieces would still be equal to the pound weight. And if we always denote 240 pieces or pence by the same symbol, l., whatever their weight may be, we should have the I lb. of Silver equal to Il . plus the number of pieces above 240 .

This is what the Sovereigns of all these countries have done. Being unable to increase the quantity of Silver, they adopted the fraudulent plan of cutting the pound weight of silver into more than 240 pieces. In I 300 Edward I. cut the pound weight of silver into 243 pence : subsequent Sovereigns followed this evil example, until at last in the time of Elizabeth the pound
weight of silver was coined into 744 pence. Then we have manifestly-

$$
744 \text { pence }=62 \text { shillings }=3 l .2 s .=1 \mathrm{lb} .
$$

As there are 12 ounces in the pound weight of Silver, each ounce was coined into 62 pence ; and hence the Mint Price of Silver was said to be $5 s .2 d$. per ounce.
8. In course of time Gold was coined into money concurrently with Silver. In the reign of Charles II. the African company brought home a large quantity of gold from the Guinea coast. He coined this gold into pieces which he called Guineas, and which were intended to be of the value of 20 shillings, so as to represent the $l$. But the Mint rating of the coins did not agree with the relative values of gold and silver in the market of the world. In 1717 Sir Isaac Newton, the Master of the Mint, reported to Parliament that the true value of the guinea was $20 s .8 d$. in silver. Nevertheless the guineas were declared to be current at $2 I S$. : and then in the language of the Mint the price of gold was fixed at $3 l$. 17s. $10 \frac{1}{2} d$. per ounce.
9. Gold and Silver coin were then declared to be legal tender for debts of any amount. But as gold was overrated by $4 d$. in the $l$., and silver was underrated by the same rate, merchants in the course of the last century universally adopted the custom of paying their debts in gold in preference to silver, as being the cheaper medium; and, in accordance with Gresham's Law, the silver coins were exported as being depressed below their true value in this country. Gold thus gradually became the measure of value in England: and for exactly the opposite reason silver came to be the measure of value in France.

In 1816 this custom was adopted as law: and gold was declared to be the only legal measure of value to an unlimited amount: and the Sovereign was struck to represent the value of 20 shillings in silver or the $l$.
10. The coinage of gold is free to the public; but the coinage of silver and bronze is retained in the hands of the Government. In order to obviate the effect of Gresham's Law, the value of silver is artificially raised. Since 1816 the pound weight of silver has been coined into 66 shillings; but four of these are retained for the expenses of coinage: and the 62 lighter shillings are declared to be of the same value as the previous heavier ones. Thus 20 of them are declared to be equal in value to the Sovereign, and thus their value is artificially raised about 6 per cent. But to prevent injustice being done, they are not legal tender for any sum above 40s., it having been intended to make the double sovereign the monetary unit.

The Bronze coins are only worth about one-fourth of their nominal value : pence and half-pence are only legal tender for the value of one shilling, and farthings to the value of sixpence.

## CHAPTER IV.

## THE THEORY OF CREDIT.

1. The Theory of Credit was brought to practical perfection by a long series of illustrious lawyers, whose doctrines were declared to be law by the Legislation of Justinian in the beginning of the sixth century. The modern system of Credit and Banking is simply the practical exemplification of these principles.

But for the complete elucidation of the Theory of Credit something more is required. For considerably more than a century mathematicians have been in the habit of calling Debts 'Negative' Quantities. But, from a want of knowledge of Mercantile Law, and the facts of commerce, they have not succeeded in giving the right interpretation to the term 'Negative' as applied to Debts.

We shall show the true meaning of the term 'Negative' as applied to Debts: and when we combine these three things to-gether-an exposition of the Facts of Commerce-an exposition of the Law of Credit-and show the application of the Theory of Algebraical Signs to these facts, we shall find a most beautiful exemplification of the use of these signs, strictly conformable to their use in Natural Philosophy. The principles of Algebra and Law and the practice of Mercantile men are in perfect harmony: and we shall in this chapter explain this branch of Economic Theory, so as to bring it to the level of Mercantile practice.

## On the Nature of Credit.

2. All modern Economists admit that human Abilities, Energy, Skill, and Character are Wealth, because men can make a Profit by their use. They are called Moral or Personal Capital. These Moral Qualities and Character may be used to purchase Merchandise with a Promise to pay at a future time instead of with actual money, and when they are so they are in popular language termed Credit.

Thus Demosthenes says, 'There being two kinds of Pro-perty-Money and General Credit-our greatest Property is Credit.'

And also, ' If you were ignorant of this, that Credit is the greatest Capital of all towards the acquisition of wealth, you would be utterly ignorant.'

So Melon says, 'To the calculation of Values in Money there must be added the current Credit of the merchant, and his possible Credit.'

So also Dutot, 'A well-managed Credit amounts to tenfold the funds of a merchant : and he gains as much by this Credit as if he had ten times as much Money.'
' Credit is, therefore, the greatest Wealth to every man who carries on commerce.'

When a merchant makes a purchase with his Credit instead of with Money, the Property in the goods passes to the buyer as absolutely and as fully as if he had paid for them with Money. But at the very instant that the Property in the goods passes to the buyer there is a Contract, or Nexum, or Obligation, created between the buyer and the seller, which consists of two parts-

1. The Right to demand payment, in the person of the seller.
2. The Duty to pay, in the person of the buyer.

These two Quantities constitute the Contract, or the Obligation, which is the Bond of Law between these two persons.

In this Contract or Obligation it is the Creditor's Right to demand payment which in Law, Commerce, and Economics is termed the Credit: and this Right is Property, which the Creditor can sell to anyone else, like any material chattel : and it may be bought and sold any number of times before it is paid off : and therefore it is said in Roman Law, 'Under the term wealth . . . Rights are included.'

Thus Credit is the Name of a kind of Incorporeal Property : it is the Right to demand a future payment : a Credit in bank is a Right of action against the banker for a sum of money : Paper Credit means Rights of action recorded on paper, such as Bank Notes, Bills of Exchange, \&c.

## On the Application of the Positive and Negative Signs to Economics.

3. We have just said that Mathematicians have not given the correct explanation of the term 'Negative' as applied to Debts. In so elementary a work we have not space to explain their error fully ; we must simply give the correct meaning.

In the beginning of works on Algebra it is usually said that the signs + and - mean addition and subtraction : that quantities before which the sign + is placed are to be added, and those before which the sign - is placed are to be subtracted.

This is true in some cases, but in others it is entirely erroneous. In one particular case the signs + and - do mean addition and subtraction, but that is only one example of a very wide and general rule.

All sciences deal with Quantities and Operations.
But though these Quantities are similar in their nature, they may be endowed with Opposite Qualities, and when they are it is universally the custom in Natural Philosophy to distinguish them by the signs + and - .

Thus Up and Down : to the Right and to the Left : Before and Behind : Before and After : the Past and the Future : Above and Below : Yes and No: Supporters and Opponents : Rights and Duties: Active and Passive, are opposite to each other.

Thus, for example, if a line drawn to the Right be called Positive, one drawn to the Left is Negative : if one drawn Up is Positive, one drawn Down is Negative : in these and innumerable other cases the signs + and - solely distinguish the opposite Quantities, and they have nothing to do with adding and subtracting. They merely denote some Opposition, Contrariety, or Inverseness in the Quantities to which they are affixed.

But also opposite Operations may be performed on these opposite Quantities which are already distinguished by opposite signs. And these Opposite or Inverse Operations are also denoted by the same signs + and -.

Thus to add and to subtract : to receive and to pay : to go forwards and backwards; and, in short, any operations whatever of an opposite nature, are denoted by these signs. Consequently if we denote to Create by + , then to Cancel or Annihilate may be denoted by -.

And the combination of these signs of opposite Operations with the signs of opposite Qualities affecting the Quantities, gives rise to the well-known Algebraical rules-

$$
\begin{aligned}
& +x+\text { gives }+ \\
& +x- \\
& -x- \\
& -x+ \\
& -x
\end{aligned}
$$

These laws, which are universally applicable in Natural Philosophy, are equally applicable to Economics, and are alone capable of giving the solution of the Theory of Credit.

There are Economic Quantities of Inverse or Opposite Properties : and therefore they may be distinguished by Opposite Signs : and also Opposite Operations may be performed on these Opposite Quantities, bringing into play the well-known Algebraical ruies.

As a familiar example of the signs of Distinction we may cite a Thermometer in which some fixed point is taken as o, and degrees above that point are marked + , and degrees below it are marked -.

If the mercury passes from any number of degrees on either side of o to any number of degrees on the other side of o, it is quite clear that to find the total number of degrees passed over the degrees on both sides must be added together.

In this and all similar cases the Negative Quantities must be added to the Positive Quantities, and not subtracted from them.

This idea of opposition is applied to motion in a continuous line : and Time in Natural Philosophy is considered as motion in a continuous line. If any point be taken in Time, and denoted by o, then Time on opposite sides of o will be denoted by opposite signs. Thus if we call Time before this era + , or Positive, then Time after this era will be -, or Negative, and the successive intervals will be denoted thus :-

$$
\cdots+5,+4,+3,+2,+1, o,-1,-2,-3,-4,-5, \ldots
$$

If the birth of Christ be taken as the given era, or o, the years before Christ will be Positive, and those after Christ will be Negative. To find the number of years from the foundation of Rome to the present time we must add $\div 753$ to -1878 , or 2631 years in all.
4. As an illustration of the application of the Positive and Negative Signs to Time, we will give an example which will be very useful in Economics. Suppose this question were asked : A father's age is 40 and his son's 15 ; when was the father twice as old as his son?

Let $x$ be the number of years before the present time when the father was twice the age of his son,
then
or

$$
\begin{aligned}
40-x & =2(15-x) \\
x & =-10
\end{aligned}
$$

What does this Negative answer mean?
It means that the father never was twice the age of his son in time past, which we have taken as Positive in the question. The epoch or event of his being twice the age of his son is to
be found in Time opposite to the past-that is, in Time future. He was not twice the age of his son ro years ago, but he will be so 10 years hence: as is very clear ; because in 10 years the father will be 50 and the son 25 .

Hence if any event which has happened in Time past be Positive, the same event if it is to happen in Time future will be iVegative.

Thus if a product or profit which has been produced or realised in Time past be Positive, the same product or profit if it is to be produced or realised in Time future is Negative. And consequently the Right to profits already realised is Positive, and the Right to profits to be realised in the future is Negative.

## The terms Positive and Negative also used by $\mathcal{F} u r i s t s ~ t o ~$ denote Opposition.

5. The terms Positive and Negative are very commonly used by Jurists to denote opposition as well as by mathematicians.

Thus Ortolan uses the terms Positive and Negative Rights to denote Rights to acts and Rights to forbearances.

Jurists class Servitudes as Positive and Negative : or those which consist in the right of using the given subject in a given manner, and those which consist in the right to a forbearance on the part of the owner from using the subject in a given manner.

Austin speaks of Positive and Negative wrongs, or wrongs of commission and omission.

In its Relation to Right a Duty is Negative : but Duties themselves are termed Positive and Negative : as there is the Duty to do something, and the Duty to abstain from doing something. Hence we may say in this case that we have a Negative sign within a Negative sign, as we shall presently find will be the case in Economics.
6. Hence, arguing from these analogies in Mathematics and Law, we may in Economics apply the terms Positive and Negative to any Quantities whatever of opposite qualities; and to any Operations whatever of an opposite nature.

Thus if the Right to demand $100 l$. be denoted by +100 ., then the Duty to pay $100 \%$. will be denoted by - 100l., without any reference to any specific rool. in cash.

## The Theo:ry of the Value of Land.

7. The Theory of the Value of Land will clearly explain the nature of Credit.

Suppose we purchase an estate in land for 100,000 l., where is the Value of our money? Does it consist in things which have a present existence? The veriest tyro would answer, Certainly not. Where, then, is the equivalent of the purchase money?

When we purchase an estate in land, we purchase the Right not only to the actually existing products of the land and labour, such as the houses, the trees, the crops on the ground, but also the Right to receive the annual products of the land for ever. We purchase the Right to a series of products which will only come into existence at definite intervals of time for ever. Thus Property in land consists of two perfectly distinct parts, Property in the products of the past and Property in the products of the future-say, 3,000l. a year for ever.

Now as these products will only come into existence at a future time, they, as has just been explained, are Negative, if we assume the products which have already come into existence as Positive ; and Property in land will be denoted thus :-

Existing products of land together with -3,000l.-3,000l. $-3,000$., \&c., for ever.

But though the yearly products of the land will only come into existence at a future time, the Right to receive them when they do come into existence is Present, and may be bought and sold like any material chattel, as a horse or a book. Hence
each of these future annual products has a Present Value; and the purchase money of the land is simply the sum of the Present Values of this series of future products for ever.

Though this series of future products is infinite, a simple Algebraical formula shows that it has a finite limit : and that limit depends chiefly upon the current average rate of interest. When the usual rate of interest is 3 per cent., the total Property in land is worth about thirty-three times its annual value : consequently in such a case one part only of the Value of land is Corporeal ; the remaining thirty-two parts are Incorporeal. If the usual rate of interest were 2 per cent. the land would be worth fifty years' purchase. In the time of Charles II. the usual rate of interest was io per cent., and the land was worth only io years' purchase.

Now when a person has bought an estate in land, it may be said without any very great metaphor that the land owes him a series of annual payments for ever : as he only bought this Right in the belief that the land would redeem it by instalments year by year.

Hence the Right to receive the future products of the land may be called the Credit of the land.

It is also to be observed from this example that every sum of money is not only equivalent to the quantity of some actually existing commodity, but also is equal to the sum of an infinite series. This Right to receive a series of payments is termed an Annuity. Thus every sum of money whatever is equivalent to a perpetual Annuity.

A merchant in trade exercising a profitable business is an Economic Quantity in many respects analogous to land. He may have accumulated Money, the fruits of his past industry ; but besides his accumulated money he possesses his skill, energy, character, his Personal Capital, his capacity to earn profits in future, as he has already done in the past, exactly as the land has not only produced profits in the past but has also the capacity to produce profits in future. Thus the Value of a man as an Economic Quantity, like the Value of land, consists in the

Property in the realised products of the past, together with the Property in the products of his future industry, which of course are Inverse or Opposite to each other. And, as in the previous case, if we choose to denote the Property in the realised profits of the past as Positive, the Property in the expected Profits of the future will be Negative.

And there are two ways in which a merchant may trade. He may buy goods with Money the fruits of his past industry; or he may buy goods by giving in exchange for them the Right to demand money which is to be earned by his future industry. Personal Capital, or Character, used in this way as Purchasing Power, is, as we have seen, in popular language termed Credit ; and as Wealth is anything which has Purchasing Power, it evidently follows that Money and Credit are equally Wealth.

But we have already seen that Capital is any Wealth, or Economic Quantity, used for the purpose of Profit; hence Money and Credit may be equally used as Capital.

## If money is Positive Capital, Credit is INegative Capital.

8. If a merchant buys goods with his Money and sells them with a profit, he first replaces the Money he expended, and the surplus is his Profit.

If he buys goods with his Credit, and sells them as before with a profit, he first discharges the Debt he incurred, and the surplus is his Profit.

In either case his Profit consists in the excess of his Property at the end of the operation above what it was at the beginning.

If he trades with Money he makes Capital of the realised Profits of the past: if he trades with Credit he makes Capital of the expected Profits of the future. In each case he makes a profit: hence by the definition both Money and Credit are Capital : but as they are inverse and opposite to each other if Money is Positive Capital, Credit is Negative Capital.

## On the Three Ambiguities in the Theory of Credit.

9. We must now notice three Ambiguities in the Theory of Credit which have been the cause of much error, and against which it is necessary to warn the student.

> First Ambiguity-A Debt is not Money owed by the Debtor, but the Personal Duty to pay Moncy.

It is very frequently supposed that a Debt is Money owed by the Debtor : or Money in the Debtor's possession to which the Creditor has a claim or Right.

This, however, is a great error, and has misled many persons: several eminent Mathematicians have fallen into this error: for when they call a Debt a 'Negative' Quantity, they mean that it is Money in the Debtor's possession, to which the Creditor has a Right, and therefore to be subtracted from the Debtor's property.

Thus suppose that a person hál a balance of 500\%. at his banker's, but owed $50 l$. ; they would write it thus : $500 \mathrm{l} .-50 \mathrm{l}$., and they would say that his property was 450 .

It is easy to show that this is an erroneous view. Suppose a person had a balance of $500 \%$. at his banker's, and had accepted a bill for $50 l$. payable three months after date. Then his Property would be stated thus : $500 \%$. $-50 \%$. But no one would say that in this case his balance at his banker's was only 450 l . ; because he is perfectly free to spend the whole of his balance of 500 l ., and all that he is bound to do is to have $50 \%$. on a certain day to discharge his Debt.

A Debt is never Money owed by the Debtor ; it is the Personal Duty to pay Money.

This error is carefully pointed out in Roman Law-' The essence of an Obligation does not consist in this, that it makes any specific goods our Property : but that it binds some Person to give us something.'

There is no particular money in the Debtor's possession which belongs to the Creditor: which he can seize upon : none is pledged to him: it continues the absolute property of the Debtor, which he has the legal right to spend or part with until of his own free will he transfers the Property in it to the Creditor. But the Debt, or Duty to pay, exists exactly the same, whether the Debtor has any Money to pay it with or not.

All Jurists have carefully pointed out that the Creditor's Right is not a Fus in re, or a Right to any specific sum, but merely a fus in personam, or a Right against the person.

Second Ambiguity-The word Debt means both the Creditor's 2eight of action as well as the Debtor's Duty to pay.

The word Debt strictly means the Debtor's Duty to pay ; but it has also long been used to mean the Creditor's Right of action as well.

It was already used in this sense in the twelfth century. In 1194 Richard I. issued a Commission for a judicial visitation on financial matters, in which it is said, ' Let all the Debts (Debita, Rights of action) of the Jews be scheduled, their lands, houses, rents, and possessions. . . .
'Also let every Jew swear that he will make a true return of all his Debts (Debita, Rights of action), pledges, rents, and all his property and possessions.'

And this is the meaning which the word pebt has long acquired in English Law. It means a Right of action, a Claim, a Demand. Thus the Act 46 Geo. III., c. 125, s. 3, enacts that 'one Debt or Demand' may be set off against another. Mr. Williams says, 'Within the class of choses-inaction was comprised a Right of growing importance-namely, that of suing for money due-which Right is all that is called a Debt.' 'A Debt was anciently considered as a mere Right to bring an action against the Debtor.'

In any daily paper it may be seen that the executors of deceased persons advertise for any persons who have 'Debts,

Claims, or Demands against the estates of deceased persons to give in a statement of them.

An administrator is appointed by the Court of the 'goods, chattels, and Credits' of the deceased.

Thus it is seen that the words Credit and Debt are used synonymously in law.

It is exactly the same in common usuage : a person makes his will, bequeathing his debts-that is, his Rights of action.

Sometimes the word pebt is used in both senses in the same Act of Parliament. Thus in the Supreme Court of Judicature Act it is said in sect. $25, \S \mathrm{I}$, ' whose estate may prove to be insufficient for the payment in full of his Debts and liabilities,' where the word Debt means the Debtor's Duty to pay.

But in § 6 of the same section it is said, 'an absolute assignment . . . . of any Debt or other legal chose-in-action . . . . to receive or claim such Debt or chose-in-action,' where the word Debt means the Creditor's Right to lemand.

Accordingly in the Digest of the Law of Bills of Exchange, Bank Notes, \&c., which we prepared for the Law Digest Commissioners we began with this definition :-

- Credit, or Debt, in Legal and Commercial [and Economical] language means a $\mathbf{R i g h t}$ of Action against a Person for a sum of money.'

Hence the student must carefully observe that the word Debt is used in English quite indiscriminately to mean both the Creditor's Right of action and the Debtor's Duty to pay ; and it requires constant vigilance to perceive in which sense it is used.

The explanation of this seeming confusion is that the word Debitum means that which is due : and if a person has the Right to demand a sum of money from another person, it is equally due that the Creditor should receive as that the Debtor should pay. Hence they are equally Debts. In French the Creditor's Right is called the Active Debt, and the Debtor's Duty is called the Passive Debt.

Third Ambiguity—Double Meaning of the words 'Eend' and
'Ioan;' or the Distinction between Muturm and Commodatum.

There is still one more ambiguity to be cleared up which has been the cause of great confusion in the Theory of Credit in recent times.

All the older writers, who were chiefly men having a practical knowledge of business, seeing that Credit causes exactly the same circulation of commodities as Money, said that Credit is Capital, without giving any very nice definition either of Credit or Capital.

Since the time of the French Economist Say, however, this doctrine has been the subject of much ridicule. He says in one passage, which has been repeated by a multitude of writers, that those who say that. Credit is Capital maintain that the same thing can be in two places at once. They concerve that Credit is the material thing lent, or the transfer $\mathrm{c}_{\mathrm{E}}^{5}$ it ; and then they ask, How can the same thing be in two places at once, and be used by two persons at the same time?

The whole misconception is founded on an ambiguity in the meaning of the words Iend and Ioan, which are used to denote two operations of an essentially distinct nature.

There are two distinct kinds of Right-the Right of Possession only and the Right of Property.

And there are two distinct kinds of Loan-the one in which the Right of possession only for a certain time is given : the other in which the absolute Property in the thing 'lent' is transferred to the 'borrower,' and the 'lender' only acquires the Right to demand back an equivalent amount to the quantity 'lent.'

Sometimes a thing is 'lent' which cannot be used without its destruction or consumption, or its alienation. From the necessity of the case, therefore, the Property in it must be transferred to the borrower. Thus if bread, corn, wine, oil, \&c., be borrowed, they cannot be used without their destruction.

Money also cannot be used unless the borrower exchanges it away in commerce ; consequently the borrower of Money must acquire the absolute Property,in it.

In all cases of Loan, therefore, of such things as corn, bread, wine, oil, \&c., and also of money, the borrower acquires the absolute Property in them: and an Obligation is created between the 'borrower' and the 'lender' by which the lender acquires the Right to demand back an equivalent amount of the things lent ; but not the identical things lent. A loan of this kind is called in Roman Law a mutuum, which word they derived from quod de meo tuum fit (because from my Property it becomes yours). Modern scholars, however, repudiate this etymology, and say that Mutuum comes from mutare, to exchange, because in this case there is always an exchange of Properties. In these cases the relation of Creditor and Debtor is created between the parties; and the right which the lender has to demand back an equivalent amount of the thing lent is the Credit.

The other species of Loan is of a totally different kind. It a person lends his friend a book or a horse, the friend can enjoy the use of the book or the horse without either destroying them or alienating them. Consequently in such cases the borrower does not acquire the Right of Property in them, but only the Right of Possession for a limited period : and then he must restore the identical book and the identical horse lent. In this case the lender does not cede the Property in the thing lent to the borrower ; and in Roman Law this kind of 'Loan' is called a Commodatum : and the relation of Creditor and Debtor is not created between the lender and the borrower.

In English Law the former kind of loans are said to be returnable in genere, because only similar things are given back : the latter are said to be returnable in specie, because the identical things are given back.

Precisely the same relation is created on the Sale of goods on Credit. The Property in the goods is ceded absolutely ta the buyer: and what the seller receives in exchange for the
goods is the Right or Property to demand their Price in money at a future time : and this Right or Property is termed Credit.

Thus the Economic Quantity called Credit or Debt is the Right which is created on a Loan of money, wine, bread, oil, and things of that nature to demand back an equal quantity to the things lent ; or the right which is created on a Sale of goods on Credit to demand their Price in money at a future time. This species of Loan is in all cases a Sale, or an Exchange.

The confusion has arisen from the English and French languages having but one word in each to denote two operations of an essentially distinct nature. But the distinction is clearly pointed out in Roman law, and the Latin language has a distinct word for each operation.

## On Debts as Negative Quantities.

10. We have shown that mathematicians call Debts ' Negative' Quantities, but are mistaken in their interpretation of the term Negative. After the considerations we have presented, the real meaning of the term is perfectly clear and simple.

An Obligation consists of two parts-

1. The Creditor's Right to demand.
2. The Debtor's Duty to pay.

These two Quantities are Opposite or Inverse to each other ; the first is Active or Positive, the second is Passive or Negative.

Hence the Creditor's Right of action is the Positive Quantity, and the Debtor's Duty to pay is the Negative Quantity.

Hence if a person has a balance of $500 \%$ at his banker's, and is bound to pay 50l. at some given time; and therefore his estate may be stated thus : 500\%. - 50l., it is not to be read as if he had only 450 . at his banker's ; but it is to be read in this way : he possesses 500l., but coupled with the Duty to pay 50 . at some given time.

Hence an Obligation consists of two Opposite or Inverse Quantities, the Creditor's Right to demand ( + ) and the

Debtor's Duty to pay ( - ): and may be denoted thus: $\left\{\begin{array}{c}+ \text { rool. } \\ -100 \mathrm{l} .\end{array}\right\}$

In this case the Debt means the Duty to pay. And as these inverse or opposite Quantities are created together, can only exist together, and vanish together, they are analogous to Polar Forces.

## On Debts as 'Goods and Chattels.'

11. We have shown that in Roman Law all Rights, and Credit or Debts among them, are included under the terms Pecunia, Res, Bona, and Merx ; and also that in English Law all Property, except only freehold Property, is included under the term 'Goods and Chattels.' As, however, we shall have to exhibit the mechanism of the great commerce in Debts, it will be as well to familiarise the student somewhat more with the idea that Debts are ' Goods and Chattels.'

Thus Sheppard says under Chattels-
'All kinds of emblements, sown and growing grass cut ; all money, plate, gold, silver, jewels, utensils, household stuff, Debts, wood cut, wares in a shop, tools and instruments for work, wares, merchandise, \&c. \&c., are to be accounted as Chattels.
'All Right of action to any personal action is a Chattel.'
So it was resolved by Popham, Chief Justice of England, and many other Justices, that 'personal actions are as well included within this word Goods in an Act of Parliament as goods in possession.'

So in another case Lord Chancellor Hardwicke said, 'And Debts come within the meaning of the Act, and would pass in a will thereby.' Burnet, J., said, 'A bond-debt is certainly a Chattel.' So Parker, L. C. B., said, ' But "goods and chattels" include Debts.' Lee, C. J., said, 'A chose-in-action (as an Obligation) is a Chattel.' And Lord Hardwicke said, 'Choses-in-
action are properly within the description of "goods and chattels."'

In this case the Debt is the Creditor's Right of action.
We have dwelt rather more upon this point than we otherwise should because this is the chief difficulty which lay students find in the subject. Everyone who has studied the most elementary principles of law knows perfectly well that a Right of action or a chose-in-action is a personal chattel, like any other species of property : but lay readers feel a little difficulty at first to understand how a mere Right of action is saleable Property, just like so much iron or corn, gold, lead, coal, or anything else.

## On the Transfer of Credit or Debts.

12. A Credit, Debt, or Right of action being Property, may be sold and transferred like any other material chattel.

While it exists in the form of an invisible and intangible Right, of course it cannot be the subject of manual delivery : but it may be transferred by the consent of the parties. If John owes Richard a debt which Richard wishes to transfer to William with John's consent, the three parties may meet, and then by mutual agreement Richard transfers his Right to William, to which John expresses his consent. John is then freed from his debt to Richard, and becomes William's debtor, and Richard is released from his debt to William. And thus the Right is transferred from Richard to William as easily and as effectually as if it were a piece of money.

But a more convenient way of effecting this result is to write down John's debt upon paper, with his consent that it should be transferred to some one else.

This may be done in two forms. Richard may write an order to John to pay him or anyone he may direct the sum due, and John may write upon the paper that he agrees to this. In this form the document is called a Bill of Exchange. It is usually in this form :-

London: May 4, 1878.
Three months after date pay to myself or order the sum of fifty-six pounds for value received.

Mr. Fohn Doe.
Richard Roe.
If John agrees to this he writes his name across the face of the bill, usually with the word 'accepted,' and thus he signifies his agreement to pay anyone Richard may direct.

Richard is called the Drawer of the bill, and John the Drawee ; and when he has accepted it, the Acceptor.

Or it may be a Promise by the debtor to pay his Creditor or anyone he may name. Such an Obligation is called a Promissory Note, and is usually of this form :-

## London: May 4, 1878.

Three months after date I promise to pay Richard Roe or order the sum of forty-five pounds for value received.

John Doe.
John is then called the Maker of the note, and Richard the Payee.

When the debt is recorded on paper in these forms it becomes capable of manual delivery, like any material chattel : and whoever becomes the owner of the paper document acquires the Right of action.

## On the Extinction of Obligations.

13. Obligations are always created with the intention of being extinguished. Credit is always the Right to demand something to be paid or done : and if the promise is fulfilled the Credit is extinguished. And in that case the Promise has Value : but if the Promise cannot be fulfilled it has lost its Value, and is nothing more than a bit of paper. It is by the too extravagant creation of these Promises or Rights which cannot be paid off, that those terrible calamities called Monetary Crises are brought about : when those persons who have bought these Paper documents find that they cannot get paid.

Commercial Credit is always a promise to pay money, and it is often supposed that Bills of Exchange are always paid in money. That, however, is a very great error. There are several other methods of extinguishing Credit besides payment in money : and under the modern system very few Mercantile Bills ever are paid in actual money. There are four ways in which Obligations can be extinguished-

1. By Release, or Acceptilation.
2. By Payment in Money.
3. By Renewal or Transfer, or Novation.
4. By Set-off, or Compensation.

## On Release, or Acceptilation.

14. Suppose that a person is indebted rool. and has nothing to pay it with ; then his Property is -100 l.

Suppose that some one gives him 1001 .: he then pays his debt : his Property is o : but although he has nothing he is still rool. richer than he was before.

The same result happens if his Creditor releases him from his debt : his Property is now 0 : but he is now 100l. richer than he was before.

This shows that the Release of a Debt is exactly the same thing as Gift of Money ; a principle of great importance in conmerce.

All Jurists have enforced this principle ; thus the 'Digest' says, ' He who is freed from an Obligation has gained.'

So Pothier says, 'A Release is a Donation.'
So also Ortolan, ' The Release from a Debt is always classed as a Donation in Roman Law.'

So Von Savigny, 'The Release of a Debt always constitutes a Gift equal to the amount of the Debt, even though the Debtor is insolvent.'

The Release of a Debt may be considered to extinguish an Obligation in two ways.

First Method.-The Creditor may agree to cancel or annihi-
late his Right. As the Obligation was created by the consent of the two parties, it may be cancelled or annihilated by the same consent which called it into existence.

Now if to Create an Obligation be denoted by $+\left\{\begin{array}{l}+1001 . \\ -100 \%\end{array}\right\}$, then to Cancel or Annihilate an Obligation will be denoted by $-\left\{\begin{array}{c}+100 l . \\ -100 l\end{array}\right\}$.

Let us consider the effect of the Negative sign on each of the parties to the Obligation. The Creditor's property is $-(+100 \%$.) or -1001 . : that is, he has lost 100l. : the Debtor's property is $-(-1001$.$) . But -(-1001)=$.+1001 . : that is, the Debtor has gained 100 l . : exactly as explained above.

Second Method.-The Creditor's Right of action being a Chattel or Goods, he may present it as a gift to anyone he pleases ; and he may present it to the Debtor himself as well as to anyone else. Then the Debtor's Property will be -100 l. +100 .

These two Quantities cancel each other like $+a$ and $-a$ on the same side of an equation, and they vanish together. The Right is not in abeyance ; it is absolutely extinguished : and the +100 l. ceases to exist as well as the -rool ., or the Debt : and thus the Obligation is absolutely extinguished.

When + rool. cancels - 1ool., and when it does not.
15. It must be observed, however, that it is only in the case in which the person has the Right to demand from himself, as well as the duty to pay to himself, that the Contract is extinguished. Because a person's Property may be represented by $+100 \% .-100 \%$., and therefore for practical purposes $=0$, and yet these two Quantities will not extinguish or cancel each other.

Suppose that a person has rool. in a banker's notes, and at the same time owes some one else rool. Then his Property is $+100 \%$. - 100\%., and in substance $=0$; but in this case the
$+100 \%$ and the $-100 \%$. do not cancel each other : and the +100 . is not extinguished as an Economic Quantity, for he may pay them away in commerce.

Suppose a Banker $A$ holds iool. of another Banker $B$ 's notes : and $B$ also holds iool. of $A$ 's notes. Then the Property of each banker is $+100 \%$. $-100 \%$. : but in such a case the $+100 \%$. and the -rool . do not cancel each other : and though it may be said that the Property of each banker, so far as these notes are concerned, is $=0$, yet there are in existence 200l. of Economic Quantities.

Hence it is only when the Right and the Duty emanate from the same source, and when they are again revested in the same source from which they emanated, that they are extinguished and cancelled as Economic Quantities.

## On Payment in Mroney.

16. The preceding considerations will explain how a Payment in Money extinguishes a Debt.

Suppose that a person possesses iool. in Money, but owes 50l. : then his Property will be represented by 100\%- 50 .

His Creditor's Right to demand will be represented by $+50 \%$.

When the Creditor demands payment an exchange takes place. The Debtor gives the Creditor $50 l$. in money, and the Creditor transfers to the Debtor his Right of action.

The Debtor's property is then $50 l .-50 l .+50 l$., or $50 l$. in money, together with the Right to demand 50 l. from himself and the Duty to pay $50 l$. to himself. These two Quantities cancel each other as before : and the Debtor's Property is now 50 .

The transaction is therefore shown to be a Sale or an Exchange.

Thus the Obligation, or Contract, was originally created by the Loan or Sale of the Mutuum, and it is annihilated by the Sale or Exchange called Payment. Hence the Obligation was created by one Exchange and is annihilated by another.

## On Renewal or Transfer, or Novation.

17. The term Novation in Roman Law means substituting a new Obligation for the former one. But this may take place in two ways-
I. When the Debtor himself gives a new Obligation, which the Creditor accepts in lieu of the old one, which is thereby cancelled. This is called by us Renewal.
18. When the Debtor transfers to his Creditor an Obligation, Debt, or Credit due to him from some one else. If the Creditor agrees to receive this, he thereby discharges his own Debtor, and agrees to take the Debtor's Debtor as his new Debtor; and then his Debtor is discharged, unless he retains his Right against him as a surety.

An instance of this is where a Debtor pays his Creditor in a banker's notes. If the Creditor agrees to receive them, his Debtor is discharged, and the banker is now the Debtor to the new Creditor.

Or suppose that a Debtor and his Creditor are both customers of the same bank. The Debtor gives his Creditor a cheque on his account. The banker transfers the Credit from one account to another ; and he now becomes Debtor to the Transferee.

Thus the ' Digest' says, 'Payment includes not only Payment in Money, but also the Transfer of a Credit.'

## On Set-off, or Compensation.

18. If two persons are mutually indebted, each may claim that the Debt he has against the other shall be taken in payment of the Debt he has to pay. The Debt of each is weighed and Set off against the other, and the exchange is called Compensation. If one Debt is greater than the other, a payment in Money of the balance only is necessary.

The following are examples of Compensation:-
I. Suppose two bankers issue notes, and each gets possession
of an equal quantity of the other's notes. Then each has a Right of action-iool., say-against the other on his Notes, and at the same time the Duty to pay - 100 . on his own Notes. While the Notes of each are in the hands of the other there are of course 200\%. of Rights of action, or Credit, or Debts, or Economic Quantities, in existence. But when they meet to adjust the payment, each transfers to the other the Right of action he has against him, in satisfaction of the Debt due from himself. By this exchange each has the Right of action against himself and the Duty to pay himself. Thus, as we have already seen, both Contracts or Obligations are extinguished : and the 200\%. cease to exist as Economic Quantities.
2. Suppose a banker holds a merchant's acceptance for rool.; and the merchant holds rool. of the banker's no'es. When the banker demands payment of the merchant's acceptance, the merchant gives him his own notes: and consequently both Obligations are extinguished.
3. Suppose that two mercbants issue their acceptances for equal amounts, payable on the same day; and that each merchant holds the acceptance of the other. On the day of payment each tenders to the other his own acceptance in payment of the debt due from himself. And thus both Obligations are extinguished. We shall in the next chapter give a very striking instance of this mode of settling mercantile Obligations.

## Two Branches of the System of Credit.

19. The System of Credit is divided into two great branches, Commercial Credit and Banking Credit. In the first merchants buy commodities by means of credit payable at a certain time after date. The second is where Bankers buy these Commercial Debts or Credits, by creating Credits of their own payable on demand. Banking credit is usually created payable on demand, and must be capable of being paid if demanded. But it is not intended to be extinguished : on the contrary, it is created with the hope and expectation that it will not be extinguished, but
that it will continue in existence and do duty as money. There is no necessity that it ever should be extinguished. It may be transferred from one account to another in the same bank, and from one bank to another to the end of time. It is perfectly possible that much of the banking Credit which exists at the present day may have been originally created by the very first banks founded in this country, and there is no necessary reason why it should not continue till the end of time. Money is a very expensive machine to purchase and keep up: but Banking Credits cost nothing to create, and they may endure for ever.

## CHAPTER V.

ON COMMERCIAL CREDIT.

1. GOODS or commodities in the ordinary course of business pass through the following hands :-(I) the foreign importer : (2) the wholesale dealer : (3) the retail dealer : (4) the customer. To the first three of these persons these goods are Capital: because they import, manufacture, or buy them for the purpose of selling them again with a profit : the fourth buys them for the sake of use or enjoyment. The price the ultimate consumer pays for them nıust evidently be sufficient to repay the cost of all the preceding operations.

If the foreign importer sells the goods he bought for ready money to the wholesale dealer, he can of course immediately import or produce a further supply of goods in the room of those he has disposed of. In a similar way the wholesale dealer sells to the retail dealer; and if he were paid in ready money, he might immediately effect further purchases from the merchant to supply the place of the goods he had sold. So also if the retail dealer were always paid in ready money by his customer, he might replace the part of the stock he had sold : and so if everybody had always ready money at command, the stream of Circulation, or Production, might go on uninterruptedly as fast as Consumption or Demand would allow.

This, however, is not the case. Few or no persons have always ready money at command for what they require. Very few traders can commence with enough ready money to pay for all their purchases : and if the stream of circulation, or
production, were to stop until the consumer had paid for the goods in money, it would be vastly diminished.

Suppose, however, that the merchant, having confidence in the character of the wholesale dealer, agrees to sell the goods to him, but not to demand the money for them till some time afterwards. He accordingly parts with the Property in the goods to the wholesale dealer exactly as if he had been paid in money, and receives in return the Right to demand payment at some time after date. Now the very same circulation of goods has taken place as would have been caused by money. The only difference is that the actual payment is postponed, and for this the merchant charges a certain price. This Debt may be recorded in two ways: it may be simply recorded in the trader's books, and then it is called a Book Debt ; or else it may be embodied in a Bill of Exchange. But it is quite clear that the Property is exactly the same, whether it is in the form of a Bill or merely a Book Debt, though one form may have more conveniences than the other.

In a similar way the wholesale dealer may sell for Credit to the retail dealer, and this Debt may also be recorded in two forms like the first. As in the former case, the same Circulation, or Production, has been caused by Credit as by Money. Lastly, the retail dealer may sell to his customer on Credit, and this Debt may also be recorded in the same two forms. In this case, as in the former ones, Credit has exactly the same effect as Money in circulating goods. Hence we see that Credit has had the same effect in all respects as Money in circulating the goods from the merchant to the consumer. We also see that the passage of the goods through these various hands has generated a Debt at each transfer ; and all these Debts may be in existence at the same time.
2. The Debt for which the merchant sold the goods to the wholesale dealer is valuable property. It may be exchanged for anything else ; and the merchant can go into the market with this Debt in his hand, and buy fresh goods. When he
does so, the seller of the goods who takes the bill usually requires him to write his name on the back of it, and from that it is called an Indorsement. The meaning of this is that if the real debtor does not pay the bill when it is due the indorser promises to do s.?, if he is told of the debtor's default immediately it occurs. It the indorsee fails to do this, the indorser is discharged. The bill may then pass through any number of hands, and effect any number of exchanges, until it is paid, exactly like money. About sixty years ago almost the entire Circulating Medium of Lancashire consisted of Bills of Exchange, which sometimes had as many as 150 indorsements on them before they became due.
3. On the continent of Europe the merchants devised an extremely convenient plan. At many of the great commercial cities-Lyons, Antwerp, Brussels, and many others-there were regular fairs at stated intervals. The merchants, instead of making their bills payable at their own houses, where they must have kept cash to meet their bills, made them payable only at these fairs. On a certain day of the fair the merchants met and adjusted their mutual claims : and if their accounts were equal, they were of course balanced and paid by being exchanged against each other, by the principle of Compensation. By this means an enormous commerce was carried on without any specie.
4. In this country traders find it more convenient to sell their Bills for Money; and there are two classes of traders whose business it is to buy these commercial debts : these are Bill Discounters and Bankers. The difference between them is that Bill Discounters buy these debts with money; but Bankers always buy them with their own Credit ; as will be fully explained in the next chapter.

Thus we see that Credit produces exactly the same circulation of commodities that Money does.

## On Credit employed to Form New Products.

5. The bills we have just described were created to transfer commodities which previously existed. Such Credit is, therefore, manifestly limited by operations which have been made, and by the number of commercial exchanges. The number of bills created cannot exceed the number of transfers of the commodities : but they may be greatly less, because the same Bill may effect many transfers of property.

But since Credit is, as we have seen, exchangeable property, and a substitute for Money, it may be used equally with Money to bring new products into existence.

Suppose that the Corporation of a town wants to build a market, but has not the ready cash to do so. It may be a matter of certainty that if the market were built the stalls in it would be taken up immediately, and the rents received for them would liquidate the debt. In such a case the Corporation may issue small bonds payable at a future date : and if these were made sinall enough they might be used in the payment of workmen's wages, and circulate exactly like money until the time limited for them to be paid off. In this case, as in all cases of Credit, the Credit is merely the Present Value of the future profit : and so long as the Credit does not exceed this it is sound.

Thus in the Production of commodities which, by the unanimous consent of all Economists, includes both their formation and their transfer, Credit performs exactly the same functions as Money. So far, therefore, as Production goes, Credit is in all respects equivalent to Money: Money being the accumulation of past profits, and Credit the anticipation of future profits.

This must suffice here for the general outline of Credit ; to go deeper into the subject would be too abstruse for an elementary work like the present.

## CHAPTER VI.

THE THEORY OF BANKING.

1. The word Bank originated in this way :-In the year 117I the City of Venice was at war both with the Eastern and Western Empires, and its finances were in a state of great disorder. The Great Council ordered a forced loan of 1 per cent. to be made from all its citizens, and promised them 5 per cent. interest. Such a loan is called monte in Italian. At this period the Germans were masters of a great part of Italy : and the German word Banck was used as well as its Italian equivalent Monte, and was Italianised into Banco, and the loans or public debts were called indifferently monti or Banchi. Commissioners were appointed to manage this public debt, to pay the interest upon it, and transfer the stock.

The State of Venice took the money, which it appropriated to its own purposes, and gave its citizens in exchange for it Credit, or Stock Certificates, which they might transfer to anyone else. This was the essential feature of 'Banking,' and those traders are called 'Bankers' who buy money from their customers, and in exchange for it give them a Credit, which they can transfer to anyone else.
2. We must now explain the mechanism of Banking, and show how it augments the Capital of the country.

Suppose that the customers of a 'banker' pay in 10,000l. to their accounts. Then the money so paid in is a Mrutuum : it becomes the banker's absolute Property, and in exchange for
it the banker creates an equal amount of Credit in his customers' favour. ' That is, the 'banker' buys this money by creating an equal amount of Rights of action against himself ; and his accounts would stand thus :-

| Liabilities. | Cash Assets. |
| :---: | :---: |
| Deposits . 10,000 . |  |

These Rights of action, which the banker so created as the Price of the Money, are in the language of banking termed ' Deposits:' the money itself is termed an Asset.

The customers can either demand Money in exchange for these Rights of action ; or they can transfer them to anyone else.

But although the customers may demand payment of their Rights at any time they please, they would not pay in money to their banker's if they meant to draw it all out again immediately. Nevertheless some will want to draw out part of their funds; but if some want to draw out money, others will probably pay in money ; so that in ordinary and quiet times a banker's cash will seldom differ by more than one thirty-sixth part from day to day. Hence if a banker keeps one-tenth part of his cash to meet any demands for payment that may be made, that is ample and sufficient in all ordinary times.
3. A banker of course makes no profit by his customers paying in money: on the contrary, he often loses, because he often agrees to pay interest for it, and consequently he must trade with it in order to make profits.

A 'banker' trades in this way:-He sees that $\mathrm{r}, \mathrm{oool}$. is sufficient to bear liabilities of $10,000 l$. : consequently he argues that cash to the amount of 10,000 . will bear liabilities to several times its amount.

The most eligible mode of trading is to buy or discount Commercial Debts in the form of Bills of Exchange.

A 'banker,' seeing that one-tenth in cash is sufficient to support his liabilities, buys perhaps 40,000l. of Commercial

Bills : and he buys these Bills exactly in the same way as he bought the money : he buys them by creating Credit or Rights of action against himself. A 'banker' invariably buys or discounts a Commercial Bill by writing down the amount of it to the credit of his customer, and at the same time he charges him the discount. The Credit he creates against himself, or places to the account of his customer, in buying a bill, is also called a Deposit, equally as the Credit created in exchange for cash. Supposing the Rate of discount was 4 per cent., and the bills at three months, then the discount on this sum would be 400 l . Consequently, in exchange for the bills to the amount of 40,000 . he would create Credit against himself to the amount of 39,600 .

Hence just after purchasing these bills his accounts would stand thus :-

Liabilities.
Assets.


By this process the banker has added 39,600 l. of Credit to the previously existing Cash.

From the foregoing exposition of the business of 'banking' it is seen that this is the definition of a 'banker :' -

A Banker is a trader who buys Money and Debts by creating sther Debts.

Thus the essential and distinctive feature of a 'Bank' and a 'Banker' is to issue Credit payable on demand : and this Credit may be put into circulation and serve all the purposes of Money : and by so much Credit as the banker can maintain in circulation over and above the quantity of cash he retains he practically augments the Capital of the country.

Few persons probably have any idea of the stupendous superstructure of Credit created by the business of banking. An eminent authority has calculated that in the United Kingdom there are about $800,000,000 \%$. of Bank Credits : and these perform the function of so much gold.

Nor probably are many persons aware of the immense consequences produced by banking ; one of its consequences is that it has tripled the value of land : before the introduction of banking the usual rate of interest was io per cent., but the bankers, being able to create so much credit, which had exactly the same effects as money, were able to reduce the rate of interest, until it may be considered to be at an average about 3 per cent., and thus the value of all the land in the kingdom has been tripled.
4. The banker having created these Credits, or Rights of action, or Deposits, his customers might utilise them in two ways-
I. The banker, if his customers wished it, gave them his Promissory Note for such a sum as they pleased.
2. The customer might write an order to the banker directing him to pay such a sum as he had credit for, to anyone else or to bearer.

These paper documents neither created nor extinguished a liability ; they merely recorded it on paper for the convenience of transferring it to some one else.

London bankers continued to issue their own promissory notes till about the end of the last century : but about 1793 they discontinued this practice : and since then their customers can only circulate these Bank Credits by means of cheques. But bankers were never prohibited from issuing notes till the Bank Charter Act of 1844 .
5. Cheques being the only means the customers of a London banker have of operating on their accounts, we have now to show the different effects which may follow.
r. The actual money may be drawn out : if so, the banker's liability is extinguished : this is a resale of money to the customer : and the banker buys up the Right of action against himself.
2. The Credit may be transferred to the account of another
customer in the same bank: and consequently the payment is made without the use of any cash.
3. It may be paid into another bank : but as all banks do business in the same way, if the bank $A$ has claims against the bank $B$, it is probable that $B$ will have about an equal amount of claims against $A$. If the claims of the two banks are equal, the Cheques or orders are exchanged, and the Credits readjusted to the accounts of the different customers, without any payment in money. If it should happen that the claims of all banks against each other exactly balanced, any amount of business might be carried on without requiring a single coin. If they did not balance, it used to be the custom to pay only the difference in coin : but by an ingenious arrangement the necessity for coin is now dispensed with in all cases.

Banking is thus a species of insurance : a banker might be called upon to pay all his liabilities at once, just as all the houses insured in an office might be burnt down : or all the lives insured in an office might drop at once. But all insurance and banking is based upon the expectation that these events will not occur. A banker multiplies his liabilities upon a given basis of specie, and keeps by him a sufficient amount of cash to insure the immediate payment of all claims which are likely to be demanded of him : if an unusual demand comes upon him, he must dispose of some of the securities he has bought.

## On Cash Credits.

6. We will now give an example of the use of Credit which will display its powers in a very striking light, and to which the greatest part of the prosperity of Scotland is due.

Bankers use their credit in the operations just described to buy commercial bills which arise out of the transfer of commodities, and it has been shown that they create Credit to several times the amount of cash in their possession.

The Bank of Scotland, which was founded in 1695, began to issue Il. notes about 1704. In 1727 the Royal Bank was
founded. In the very contracted sphere of Scotch commerce at that time there were not sufficient commercial bills in circulation to exhaust the Credit of the Banks, and the Royal Bank devised a new method of getting its Credit into circulation.

It agreed upon receiving sufficient guarantees to open Credits in favour of trustworthy persons: all advances being made exclusively in its own notes.

A Cash Credit is, therefore, simply a drawing account, created in favour of a customer, upon which he may operate in precisely the same manner as upon a common drawing account : paying interest in the debit instead of receiving interest on the Credit. It is thus an inverse drawing account.

These Credits are extremely useful to all persons in business, or in commencing a profession which requires a certain amount of Capital.

Every person in business must necessarily keep a certain amount of ready money by him, to answer immediate demands for small daily expenses, wages, and other things. This, if invested in business, might produce a profit of 15 or 20 per cent. One object of a Cash Credit is to furnish the trader with the convenience of a small amount of cash upon paying a moderate interest upon it : and to allow him to invest the whole of his own cash in his business.

Several professions require a certain amount of ready Capital to start with. In England those who enter such professions must have the actual capital : in Scotland it is done by means of a Cash Credit, guaranteed by their friends.

These Credits are granted to all classes of society, to the poor as freely as to the rich. Everything depends upon character. Multitudes of men who have raised themselves from the humblest positions in life to enormous wealth began with nothing but a Cash Credit.

The operation of these Cash Credits is immensely extended beyond Commerce, and their advantages are more openly and strikingly displayed in the prodigious stimulus they have given to agriculture in Scotland. They have indeed been the principal
means of making it what it is. Scotch farmers have almost invariably nineteen years' leases, and, where they are given for the express purpose of reclaiming land, frequently much longer. The farmer desirous to effect improvements, on the security of his lease and the guarantee of his friends obtains a Cash Credit. With this advance-pure Credit-he reclaims the land, employs the people, reaps the harvest, and pays off the loan.

All public works of every description-canals, railroads, roads, bridges, docks-are all created by means of these Cash Credits.

In all these things we see the nature and the power of Credit. If they were created by means of Money, that would have been the accumulation of the Profits of the past. If they had been created by means of Money, they would have replaced the Money expended upon them. But there being no Money, the Banks plant their branches in every direction and advance an equal amount in their own I . notes: and these are the Present value of the future profit. When the profit is realised it redeems the Credit : and the result of the operation is exactly the same whether it is effected by Money or by Credit. And thus we see that Credit is Productive Capital exactly in the same way and in the same sense that Money is.

## CHAPTER VII.

## ON PROFITS.

1. Profit is the difference between the Cost of Production of anything and its Value-i.e. the difference between the sum expended in placing the thing in the market where it is offered for sale and the sum it sells for.

This difference may be either in excess of the Cost of Production, in which case it is Positive, and is called a Gain : or it may be in defect, and then it is Negative and called a 工oss.

The Rate of Profit is the amount of this difference made in some given time, as a year.

When the Profit is made on a Loan of Money, it is called Interest or Discount.

It is easily seen that the Rate of Profit varies directly as the Amount of Profit, and inversely as the Time in which it is made.

It is of the greatest importance to observe how the Rate of Profit increases as the intervals are diminished in which it is made ; as many erroneous assertions are made which arise solely from not sufficiently attending to this. To exhibit this we will give an example.

Suppose the Capital advanced is 100 l ., and the Profit is $20 l$.
Then if the Profit be made in a year the Rate of Profit is evidently 20 per cent.

If the Profit is made in a month, the Rate of Profit is 240 per cent. per annum.

If the Profit is made in a week, the Rate of Profit is $\mathrm{I}, 040$ per cent. per annum.

If the Profit is made in a day, the Rate of Profit is 7,300 per cent. per annum.

Hence, supposing that the Capital advanced is the same, and the actual Profit is the same, the Rate of Profit is enormously increased by the accelerated rapidity with which Profits are made.

The importance of this doctrine, and the social effects it produces, have scarcely yet been sufficiently appreciated by Economical writers. We will give an instance or two to exhibit this.

A retail bookseller is by the custom of the trade entitled to a discount of 25 per cent. off the published price of the book. Many booksellers offer to supply books at a discount of 20 per cent. below the published price : and this seems a very moderate profit for them to make : but let us see what the Rate of Profit is.

Suppose a purchaser orders a book from a retail bookseller one day, and gets it the next day at a discount of 20 per cent. Then the bookseller makes a profit of 5 per cent. on threefourths of the price of the book in one day, which is an actual profit of 6.666 per cent. made in one day, or at the Rate of 2,433 per cent. per annum.

A costermonger buys a basket of strawberries in Covent Garden market for $2 \frac{3}{4} d$. in the morning, and sells it for $3 d$. the same afternoon. Everyone would say that that was a very moderate profit. But it is at the Rate of more than 9 per cent. per day, which is more than 3,300 per cent. per annum.
2. The want of attention to this circumstance has had some very important effects. It has often been asserted that the interests of Capital and Labour are always antagonistic to each other : that Profits can only increase by a diminution of Wages, and Wages can only increase by a diminution of Profits : and that the gain of one must necessarily be accompanied by a loss
to the other. This doctrine, which seemed to show that the state of society must necessarily deteriorate with the increase of numbers, led a caustic philosopher of the present day to nickname Political Economy the 'dismal' science.

But a few sentences will dissipate these gloomy ideas: and will show by the simplest arithmetical calculation that Profits and Wages may very well rise together.

It is quite easy to show that Wages may be increased, actual Profit diminished, and yet the Rate of Profit greatly increased.

Suppose, as before, the Capital is rool., and the Profit $20 l$. made in a year : the Wages being a certain amount.

Suppose that the period of making the Profit is reduced to a month ; then the Rate of Profit is 240 per cent. per annum.

Suppose thar, in consequence of making the greater Profit, the Capitalist advances Wages 5l. Then the Cost of Production is $105 l$., and the Profit is $15 l$. made in one month : or nearly 143 per cent. per month : which is Profit at the Rate of more than 167 per cent. per annum.

Suppose a still more accelerated sale, and that the trader makes the Profit in a week, which is a Profit at the Rate of I,040 per cent. per annum.

Suppose that the trader, in consequence of this greatly increased Rate of Profit, raises Wages, so that Cost of Production amounts to irol. Then with an outlay of inol. he makes a Profit of rol. in one week: being more than 9 per cent. per week ; or more than 468 per cent. per annum.

Suppose a still more accelerated sale, and that the trader makes the Profit in one day : and suppose that, in consequence of this increased profit, the trader raises wages, so that cost of production amounts to $115 l$.; then with an outlay of $115 l$. he makes a Profit of $5 l$. in one day, or at the Rate of 1,825 per cent. per annum.

Hence while Price remains the same Wages may be considerably, and Rate of Profit be immensely, increased by the simple acceleration of the periods of return.

There may, therefore, be a solidarity of interest between Capitalist and Workman ; and not a necessary antagonism, according to the doctrine we have alluded to. In fact, it is entirely founded on an arithmetical mistake. The writers who support it have entirely failed to perceive that Time is a necessary element in the definition of Rate of Profit : they define the Rate of Profit to be merely the ratio of the Profit to the Capital ; and they never perceived that a Profit made in a day is a very different Rate of Profit than the same Profit made in a year : and thus whole masses of their doctrine come tumbling down by the simple rectification of an Arithmetical definition, just as if a barrel of dynamite were placed under the Monument.

Thus is verified the truth of the trade axiom, Small profits and quick returns.
3. Persons who engage in trade must live by their trade ; they must, therefore, necessarily charge their customers such prices as will enable them in the long run to live on the profits of their trade. Hence, when transactions are very trifling in number and very small in amount, they must charge very high prices in order to enable them to live. It is this circumstance that compels small shopkeepers in country districts to charge such high prices for their goods, to the great indignation of many well-meaning but unreflecting persons. It is not uncommon to hear such persons exclaim against the extortionate charges of country shopkeepers, quite forgetting that if the traders cannot make a living out of their business they mustgive it up altogether ; and the people be totally deprived of the convenience.

It has sometimes happened that country gentlemen, having plenty of other means to back them, have established rival shops for the express purpose of beating down the prices of country shopkeepers. The consequence has been that the traders who had nothing but their business to support them have been ruined; the gentlemen in process of time either got
tired of their whim, or for other reasons abandoned it ; and the germ of a nascent trade in a district was destroyed : a pregnant example of the Spanish proverb, 'Hell is paved with good intentions.'

It is also the extremely minute amount of the transactions of apothecaries and druggists which obliges them to charge such enormous profits, and not only the reward due to their superior skill. The druggist probably sells for a shilling what cost him a farthing. This apparently enormous profit is simply the necessary consequence of the exceedingly minute sums in which he deals. When a trader deals in large sums he can live upon a profit of 5 per cent. per day. But when the sums he deals in are shillings and pence, the profit must be enormous to enable him to live. People do not require medicine by pounds' worth, but by shillings' worth and pennyworths, and hence his enormous profit is necessary to enable the trade to exist.

But a multiplication of transactions and an increase of their amount inevitably lowers prices. Nowhere are rents so high as in the City of London : and nowhere are the prices of ordinary goods so moderate Goods in the City are in many cases 25 per cent. cheaper than in the suburbs; and this is not entirely the result of competition, which is equally active in one place as in the other ; but it is the result of the greater number and magnitude of the transactions.

It is for the same reason that large Capitals always crush out small Capitals in a business; because large Capitalists can always live on smaller profits than small ones. If a trader had $1,000,000$. he could live very well upon a profit of 5 per cent. per annum, or 50,000 . a year : but if he had only a capital of 100 . he could not exist upon 5l. a year.
4. Senior originated an expression which is often repeated, but which is very inadequate. He said that Profits are the reward of abstinence : meaning that they are the reward of Capital, or things which are saved from the past, and devoted to reproduction instead of personal enjoyment. But, after the
exposition of the system of Credit which we have given, it is evident that this expression is very inadequate, because the enormously greater proportion of trade is carried on by Credit, which is not the savings of the past, but the anticipation of the future. Hence Profits are not only the reward of abstinence, but to a very much greater amount the reward of foresight.

## Interest and Discount.

5. The Profit made by the loan of Money is called Interest or Discount.

If the unit of Debt to be bought is 100 . and the Profit 5 l.-
In the case of Interest the lender pays down 1ool., and in exchange for it receives the Right to demand $105 \%$ at the end of the year.

In the case of Discount the lender pays down 95l., and receives in exchange the Right to demand 100 . at the end of the year.

Of these two methods of trading in money Insurance and other Companies which make advances to landowners adopt the method of Interest ; but Bankers and dealers in money invariably adopt that of Discount.

As by Discount a Profit of $5 l$. is made on the actual advance of $95 l$., while by Interest a Profit of $5 l$. is made on the actual advance of rool., it is evident that Discount is more profitable than Interest.

While the Rates are moderate the difference is not great: but as the Rates increase the difference increases at an enormous ratio ; as a few examples will show.

Suppose a Money-lender discounts a Bill at 20 per cent. : he advances 8ol., and at the end of the year he receives rool., and his Profit is 25 per cent.

If he discounts a Bill at 50 per cent., he advances 50l., and at the end of the year receives $100 \%$. : therefore his Profit equals the advance, or is 100 per cent.

Suppose a man lent 100 . at ioo per cent. interest, at the end
of the year he would receive $200 \%$; and his Profit would be 100 per cent. : if he discounted a bill at 100 per cent. he would advance nothing, and he would receive sool. at the end of the year, or his Profits would be infinite!
6. The Rate of Interest in a country at any time depends upon the General Law of Supply and Demand : but there are several circumstances which influence it indirectly, and it is of great consequence to all sorts of commercial enterprise to have the average rate of interest as low as possible.

The Value of all Property which produces an annual revenue in the nature of fixed capital depends very greatly upon the average Rate of Interest : such as the Funds, Land, Shares in Commercial Companies, and Annuities of all sorts.
7. We cannot in this brief outline give any account of the long-continued prejudice against interest. Even in this commercial country it was only in 1833 that it became lawful to take more than 5 per cent. interest on commercial bills; and only in 1854 that the Usury Laws were finally abolished. In France interest is still limited to 6 per cent., except in the case of the Bank of France, which is allowed to raise its rate above that in order to be able to prevent a drain of gold from the country. And this in the country where Turgot demonstrated the futility of Usury laws before Bentham.

We may give a few examples to show the futility of usury laws. Boisguillebert says that the small provision dealers of Paris throve on money borrowed at the rate of five sous the crown per week, or more than 400 per cent. per annum, because they sold perhaps five crowns' worth of merchandise, on which they gained one-half, or 50 per cent. (i.e. 18,250 per cent. per annum) ; and if they perform this operation five or six times a week, it is easy to live and pay such interest to those who lent them the money.

So Gerard Malynes says that the similar trade of London was carried on with money borrowed at the rate of $I d$. per
shilling per week, which is about 433 per cent. per annum. Turgot cites the case of the same class of people in his day, who carried on their trade with money borrowed at 173 per cent. per annum, to show the absurdity of the usury laws. And a still more striking example is given by M. Gustave de Puynode, quoting from the speech of a member of the last Legislative Assembly of France. He said, ' Every morning the small provision dealers receive a five-franc piece to buy the objects, which they resell with a profit of three or four francs. In the evening they repay the five francs with twenty-five centimes in addition. They make no complaint of interest, which is yet at the rate of $\mathrm{I}, 800$ per cent.' Nor had they any reason to do so ; for by borrowing this five-franc piece they made three francs of profit, out of which they only paid one-quarter of a franc as interest. Now their profit was 21,600 per cent. per annum ; and if they made that profit they could well afford to pay 1,800 per cent., or the one-twelfth part of it, as interest.

## I I I

## CHAPTER VIII.

## ON RENT.

1. Rent is the Right to demand compensation for the use of certain species of property, when the compensation is paid in the form of a series of payments, or an Annuity : such as Lands, Houses, Copyrights, Patents, Mint dies, Telegraph wires, \&c.

It was also formerly applied to an Annuity paid for the use of money, as the Funds. This use of the term has been discontinued in this country : but the French Funds are called Rentes; a Fundholder in French is called a Rentier. Turgot speaks of the Intérêt Terrier and the Intérêt Rentier, or the landed interest and the monied interest.

The nature and effects of Rent gave rise to a well-known controversy among Economists. It arose out of the self-contradictions of Smith on Rent ; because in one series of passages he says that Rent is a cause of Price-that is, that it is part of price-and therefore that the payment of Rent raises the price of corn ; and in another series of passages he says that Rent is the effect of Price-that is, that Rent can only be paid when the Price rises-and consequently that it does not affect the Price of corn.

In this short outline we have not space to give the details of this controversy ; we can only examine the practical question whether the payment of Rent raises the price of corn; and whether corn would be any the cheaper if Rent was withheld from the landlords.

To determine this we have only to consider how Rent arises, and what it is, and then consider the application of the General Equation of Economics to these facts.
I. The first thing necessary is that the land should belong to one person, and be let out to another : or that the relation of Landlord and Tenant should exist.
2. The possibility of Rent being paid arises from this : that a few persons, especially with the assistance of horses, cattle, and agricultural implements, can raise from the earth a very much larger amount of produce than is necessary for their own subsistence.
3. We have, then, to consider under what circumstances Rent will arise.

Suppose that a tract of country belonged to the State, or to a private individual: suppose that this land was of varying degrees of fertility, and suppose further that each family had exactly as much land as was absolutely necessary for their own subsistence, and no more. Then it is clear that they could pay no rent : because they would have no surplus produce to pay it with.

Suppose, however, that each family had a very much larger quantity of land than was necessary for their own subsistence. Then after they had provided for their own subsistence they could give the surplus produce to the landlord, and that surplus produce is the Rent.

Now of course if the land is rich and productive, the family would be able to give more of the produce to the landlord, because they could subsist on a smaller amount of land.

If the land was very poor they would of course require a larger amount for their own subsistence ; and they could only afford to give the landlord a smaller amount than if the land was rich.

But the possibility of the payment of Rent entirely depends upon the question whether the tenants have a surplus after providing for their own subsistence.
2. We have next to consider whether the payment of Rent raises the price of corn.

Suppose a farm near a town : the price of corn in the market is determined by the Law of Supply and Demand. If $A$ is the possessor of the farm he will reap all the profits made by it. If he has a partner $B$, the same quantity of produce is brought to the market ; and $A$ and $B$ will share the profits between them. $A$ no doubt will have less profits than if he was sole owner of the farm. But it is quite evident that, whether $A$ has a partner or not, it can in no way affect the price of corn, because it neither alters the Supply nor the Demand.

Now suppose $A$ and $B$ are landlord and tenant. Then the produce is raised and brought to market, and the tenant pays the landlord a stipulated share of the profits. But that neither alters the quantity produced nor the quantity demanded, and therefore it cannot affect the price of the corn. Hence the price of corn cannot be affected whether a single person produces it, or whether two do so in partnership.

The same reasoning applies to Tithes : Tithes, like Rent, are the Right to a share of the produce. Hence in this case three persons share the produce of the land instead of two. But that neither alters the Supply nor the Demand. Hence neither the payment of Rent nor Tithes can in any way affect the price of corn, any more than it affects the price of goods in a shop, whether there are one, two, or three partners in the concern.
3. Rent can always be paid in kind when the quantity of the produce leaves a surplus after providing for the subsistence of the tenants ; and Rent can always be paid in Money when the Value of the produce leaves a surplus after providing for the subsistence of the tenants.

In a young colony where only a small town population exists there is, of course, only a small demand for the produce of the land, which will therefore be at a low price ; consequently it is only the lands near the town which can be cultivated for profit; because, in the first place, there is no demand for the produce,
and secondly, the price of it is so low that it would not pay to bring it from a distance. But the more the town population increases the greater will be the demand for corn, and of course the price will rise, and then it will pay to enlarge the area of cultivation. The rent of land near the town will rise, because the Value of the produce will rise ; but the greater the distance from the town the greater the cost of production is, or the expense of placing it in the market : and as, of course, all the corn of the same quality in the same market will bear the same price, whatever its cost of production may be, as the cost of production increases, the Profit, out of which Rent is paid, decreases, until at last no surplus Profit is left to pay Rent. Consequently no Rent can be paid for corn grown at such a distance from the town. An American writer justly says, 'The cost of transport has fixed year after year the limit of agriculture. Translated into miles of railroad, it has been the radius that has described the charmed circle within which grain-growing would pay : for the price of grain at Liverpool fixes its price at any point in this country. The farmer sells his wheat at Liverpool price, less the cost of transport to Liverpool. As that cost increases his profit decreases. When it reaches a certain point, his profit is nil, and he must stop producing.' And this doctrine is universally true ; it is invariably the price of the great City markets which fixes the price of all sorts of country pro-duce-corn, meat, poultry, eggs, \&c.-and not the reverse, as is so often supposed. It is not the cost of production of country produce which fixes the price in the London market, as is so often supposed; but the price in the London market which indicates whether the produce can be raised at such a cost as to leave a profit.

Consequently the Rent which can be paid for land progressively diminishes, until at last it ceases altogether. This accidental difference in the cost of production, or the cost of placing the produce in the market, has actually led some Economists to the extraordinary hallucination that the payment of Rent is exclusively due to these differences of cost of pro-
duction; and that no such thing as Rent could exist, if it were not for these differences of cost of production.

To exemplify this doctrine let us take the case of the colony we have just supposed. As long as there is only one centre of consumption of course there will be differences of cost of production in placing the produce in the market; and then, according to these Economists, Rent can be paid. But suppose that other centres of consumption spring up from any cause, so that, as we may suppose, the cost of production, or the cost of placing the produce in the various markets, is equalised ; then, according to this doctrine, no Rent could be paid! The very statement of such a doctrine is its refutation.

If this doctrine were true a large extent of country of uniform fertility and convenient access to markets, like the plains of Bengal or Lombardy, could pay no Rent !

We need scarcely say that this is the Ricardo Theory of Rent, which some Economists admire so much; and which Mill says is the pons asinorum of Political Economy, but which any practical man of business would laugh at.

Ricardo applied this theory to mines as well as to land: and Mill, as usual copying Ricardo, says, ' Agricultural productions are not the only commodities which have several different costs of production at once, and which in consequence of that difference, and in proportion to it, afford a rent. Almost all kinds of raw material extracted from the interior of the earth-metals, coals, precious stones, $\& c$.-are obtained from mines differing considerably in fertility-that is, yielding very different quantities of the product to the same quantity of labour and capital.'

Now let us observe the necessary consequence of such doctrines. If the rent of mines arises solely from differences in the fertility of mines, and is only paid in consequence of that difference, it manifestly follows that if all the mines were of equal fertility there could be no such thing as Rent-a doctrine too absurd to require a moment's refutation. It would manifestly be just as absurd to say that Rent is paid for houses because houses are of different sizes : and that if all the houses
in a great city, like London and Paris, were of the same size there could not be any such thing as Rent : or that freights are paid for ships because ships are of different sizes, and that if all ships were of the same size there could be no such thing as freights: or that wages or salary are paid to men because men differ in capacity, and that if all men were of equal capacity there could be no such thing as wages or salary : and so on in innumerable cases: in short, if the Ricardo-Mill Theory of Rent be true, prices are only paid for anything because things differ in quality or degree.

But this does not exhaust the absurdity of the Ricardo-Mill Theory of Rent : because if it were true, as they say, that Rent only arises from differences of fertility between different mines, it would follow that if there be but a single mine or quarry no Rent could be paid for it !

But, in fact, Mill himself has entirely overthrown this Theory of Rent. He says, 'Whatever be the causes, it is a fact that mines of different degrees of richness are in operation, and since the value of the produce must be proportional to the cost of production at the worst mine (fertility and situation together) it is more than proportional to the best. All mines superior in produce to the worst actually worked will yield, therefore, a rent equal to the excess. They may yield more, and the worst mine may itself yield a rent.'

Now if this be true, which it undoubtedly is, what becomes of the doctrine that mines only pay a Rent in consequence of their being of different degrees of fertility : and that the Rent is the excess of the more fertile mines above the least fertile one? If all mines pay a Rent, how can it be essential to Rent that they should differ in fertility? It is evident that it is a mere accident that mines differ in fertility. All differences of fertility in soils are the mere accident of Rent, and not its essence. As M. H. Passy truly observes, this is to take the circumstances which make a difference in the Rate of Rent for the cause which produces Rent. It needs no ghost to tell us
that lands and mines which possess superior advantages of fertility and situation will pay a higher Rent than inferior ones.

The capability of Rent being paid for a farm purely depends upon the question whether the Value of the produce of the farm leaves sufficient profits, after defraying cost of production, farmer's necessary profits, \&c., to pay Rent : it has absolutely nothing whatever to do with the consideration whether other farms are more or less fertile than itself : and the Value of the produce depends upon the Intensity of Demand and the Limitation of Supply of the produce in the market: and thus the whole question is brought under the dominion of the General Equation of Economics.
4. Rent, then, as has been seen, does not affect the price of agricultural produce, because a certain Price in the market is necessary to attract a certain supply : and how that Price is divided can make no difference to the Consumer. Besides that, the agricultural Producers are far too numerous to combine : if they could combine and limit the supply they might undoubtedly force up the price of corn. This was formerly attempted to be done by excluding foreign corn, and so limiting the supply. But all these laws have now been abolished; and each producer must adapt himself to the circumstances of the market. It is said that the owners of mines, especially coal mines, have on some occasions combined to limit the supply, so as to force up the price.

But the case of shops differs from that of land. In these Rent does undoubtedly enter into price : because in such cases it is part of the necessary cost of production. No man created the land or the minerals: but shops are not the gift of nature. They are created by the expenditure of Capital, which is part of the necessary cost of production, and it must be replaced in the price of the articles. Moreover, each shop is a little market in itself : over which the producer has complete command, only controlled by other producers, who are all in a similar position. A retail dealer buys his goods at a certain price from the
wholesale dealer, and he has a certain price to pay for Rent : or if he built the shop himself, he must have laid out a certain Capital on it, and must have a certain interest on that expenditure. He must also provide for his own maintenance. He expects to have a certain amount of custom: he therefore fixes such a price upon his articles as he estimates will provide for these things. If he cannot obtain these returns he must give up his business. All his competitors are exactly in the same position : and thus the producers have the command of the market. The prices which each may fix are only controlled by what he thinks his customers will give, and his fellow competitors will enforce as well as himself. None of these competitors, however, can afford to sell below that amount, any more than he can. Consequently, in such cases, Rent is a part of the necessary cost of production, as being only the interest on capital expended : and production must cease unless such interest is afforded : and therefore in such cases it necessarily and justly forms part of price.

It is easily seen that this is true by anyone who considers the difference between the prices of fish, fruit, and vegetables as sold in shops, where the shop is fixed capital, and the same articles sold by costermongers in the street, whose only fixed capital is a barrow.

## CHAPTER IX.

ON LABOUR, OR IMMATERIAL WEALTH, AND WAGES.

## Definition of Labour.

1. We have now to consider Labour, or Immaterial Wealth, the second of the three species into which Economic Quantities are divided.

The author of the 'Eryxias' showed that Labour is Wealth, for the same reason that gold and silver are ; because persons can gain things in exchange for it ; and all Economists since Smith treat Labour as a marketable commodity, subject to the general Laws of Value.

Labour is sometimes divided into muscular and nervous, or Labour of the body and of the mind. In common parlance it is more frequently applied to the Labour of the hands or body ; and the term Labourers is often considered to apply only to such persons as ploughmen, carpenters, masons, and other artisans. This, however, is a grievous error. Labour in Economics means an exertion of the mind, however manifested, either by the hand, the tongue, or in any other way. However simple work may be, it must be directed by thought. All Labour is in reality Thought, accompanied more or less by muscular exertion : and the sedentary scientific student, the lawyer, the clergyman, the professor, the painter, the cabinet minister, the banker, the merchant, are as truly labourers and working men as any carpenters. masons, or ploughmen. As Corin says truly-

Sir, I am a true Labourer: I earn my bread.

All persons are Labourers who earn their bread by personal exertion or services, from the Lord Chancellor to the lowest hodman. Nothing can be more unfortunate than making distinctions in kind where none exist in reality, and marking off certain portions of the community as working classes, and supposing that they are governed by peculiar laws, different from those relating to other classes. Each of the great sciences -Astronomy, Geometry, Optics, Engineering, Medicine, Lawis as truly the product of Labour as the Pyramids, a railway, or an ironclad.

Smith expressly includes 'the acquired and useful abilities of all the inhabitants or members of the society, under the title of fixed Capital, and he says, 'The Property which every man has in his own Labour, as it is the original foundation of all other property, so it is the most sacred and inviolable. The patrimony of a poor man lies in the strength and dexterity of his hands.' Ricardo designates Labour as a Commodity. So Huskisson said, 'Labour is the poor man's Capital,' meaning the Commodity he has to offer for sale to make a profit by. Dr. Stirling says very truly, ' Trade regards Labour itself simply as a matter of traffic and exchange ; a thing to be bought and sold in the market, a Commodity-one, indeed, of primary importance, compared with which all others dwindle into insignificance; but still a Commodity, which varies in quantity and fluctuates in price, and the Value of which, consequently, is governed by the very same laws which regulate the value of those Commodities which are the products of Labour.'

Labour, therefore, being simply a Commodity, there is a market for it, like as there is for anything else. There is a Labour market, just as there is a corn market, a meat market, a poultry market, a vegetable market, or a fish market.

## On wages.

2. When one person sells to another the Right to demand so much Labour or Service from him of any description, he
becomes the servant of that person, and the remuneration he receives is properly termed wages in our homely old English. In modern times some classes of Labourers or servants disdain this old Saxon word, and adopt others. Wages is now usually confined to the sum paid for manual labour. Officers in the services speak of their Pay: Professional men of their Fees: employés of all sorts of their Salary. But all these names merely denote the reward for labour ; and all who receive them are Labourers, whatever their rank or the nature of their Labour may be. Wages are often distinguished as Nominal and Real : nominal being the number of coins or pieces of money the labourer receives; and real wages being the amount of necessaries and enjoyments those pieces can command.

## The wages Fund.

3. Many writers seem to think that there is some definite Fund set apart for the maintenance of Labourers, which they call the Labour Fund, or the Wages Fund, which they suppose regulates Wages. Thus Jones, who confines Wealth to material objects only, says Wages depend upon the amount of Wealth devoted to maintaining Labourers. And almost all writers who have spoken of this Wages Fund have considered it to be the accumulated results of past labour. But such ideas are highly erroneous. No better example of their fallacy can be given than the system of Cash Credits in Scotland, as applied to agricultural improvements. We have shown that these were not effected by the accumulated results of past labour ; but by Credit, or the anticipation of future profits. The same principle of course is true everywhere else. The Wages Fund in every case is not the fund which an employer may have, but the anticipated price of the article. And how is this to be obtained before it is actually received? By means of Banking Credits. This is one of the functions and uses of Banks. It is to create Credit to form the Wages Fund, in anticipation of the prices paid by the consumers : and thus is seen the immense im-
portance of a solid banking system to the labouring classes. It multiplies the Wages Fund a hundredfold, and provides continuous employment for them as long as there is a prospect of continuous dcmand for their products.

## On Rate of Wages.

4. Having thus shown that Money and Credit are the Fund out of which Wages are paid, we have next to determine what governs the Rate of Wages.

It was long maintained that Wages are regulated by the price of food; and this was one of the assertions on which the Protectionist system was based.

Thus Smith in one place says, 'The money price of corn regulates that of all other home-made commodities.
' It regulates the Money price of Labour, which must always be such as to enable the labourer to purchase a quantity of corn sufficient to maintain him and his family. . . .
' By regulating the money price of all other parts of the rude produce of land, it regulates that of the materials of almost all manufactures. By regulating the money price of labour, it regulates that of manufacturing art and industry ; and by regulating both it regulates that of the complete manufacture. The money price of labour, and of everything that is the produce either of land or labour, must necessarily either rise or fall in proportion to the money price of corn.'

Thus it is seen that Smith asserts that the Rate of Wages is regulated by the price of corn.

But the same Smith also says, ' The Wages of Labour do not in Great Britain fluctuate with the price of provisions. These vary everywhere from year to year, frequently from month to month. But in many places the money price of labour remains uniformly the same sometimes for half a century together. . . .
'The variations in the price of Labour not only do not correspond either in time or place with those in the price of provisions, but they are frequently quite opposite.'

Thus Smith's doctrines are quite contradictory. Burke saw the truth: 'The squires of Norfolk had dined when they gave it as their opinion that it (Labour) might or ought to rise or fall with the market of provisions. The rate of wages in truth has no direct relation to that price. Labour is a commodity like every other, and rises and falls according to demand.'

Ricardo also says, 'The natural price of Labour is that price which is necessary to enable the labourers, one with another, to subsist and perpetuate their race, without either increase or diminution.' 'The natural price of Labour depends on the price of food, necessaries, and conveniences required for the support of the labourer and his family. With a rise in the price of food and necessaries the natural price of labour will rise : with a fall in their price the natural price of labour will fall'

Very slight reflection will show how vague and inaccurate the ideas in these sentences are. What are the natural food, necessaries, and conveniences of the labourer? The standard varies in every country. Are we to take the wheaten standard of England, the oaten standard of Scotland, the potato standard of Ireland, or the black rye standard of Poland? Which of these is the natural standard? Wages in the West Riding of Yorkshire used to be 14s., in Dorsetshire 7s., a week. Which of these was the natural standard ?

It is quite manifest that it is not the price of food which regulates wages, but the wages received which indicate the most expensive food which the labourers can afford to buy. Wages have not risen because the labourers eat wheaten bread instead of rye, as formerly : but they eat wheaten bread because their wages enable them to do so. The wages were not so low in Ireland because the people lived upon potatoes, but they were obliged to live upon potatoes because their wages were so low : and their wages were so low because there were so many labourers and so little employment. So it is on the continent of Europe. The people in many Continental countries live so badly because their wages are so low. Nothing can show more
clearly the error of the idea that the price of food regulates wages than, on the one hand, America, Canada, Australia, and other new colonies, where labour is very high and food very cheap ; and, on the other hand, where food is much dearer and Labour much lower. Take the case of the unfortunate needlewomen of London and other cities of Western Europe. Garnier remarks exactly the same of the needle-women of Paris. 'At Paris all needle-work has fallen so low that those cannot live by it who have no other resource.' And Dr. Mayer says that at Lille the workwomen who make lace gain from $\mathrm{I} d$. to $\mathrm{I} \frac{1}{2} d$. a day, working sixteen hours. And population has increased so much, compared to employment, that those who could gain two or three francs thirty years before-in 1845-could only gain one franc, and those the most favoured. At the other extremity of the world we may take China as an example of the same truth. Travellers give us an account of the disgusting garbage which the poorer Chinese will eat : and why is this? Simply because of their enormous numbers and scant employment.

It is the Law of Supply and Demand which governs wages, like the value of everything eise. An excessive increase of the number of workpeople forces down wages by an inevitable Law of nature; and as their numbers increase faster than their employment, their wages must progressively diminish, and their comforts and scale of living become progressively deteriorated. Nothing could prevent the scale of living of the poorer classes of this country descending to the level of the Irish or the Chinese, if their numbers went on increasing without a corresponding increase of employment.

It is no mere speculative opinion that a general and longcontinued low price of corn is not only not necessarily accompanied by a low rate of wages, but most probably by the very reverse. The most remarkable continuance of generally fine seasons and abundance of corn ever known in England, occurred in the last century. For the extraordinary period of sixty-five years-from 1701 to 1765 -there was, with few exceptions, a continued series of plentiful harvests. The average price of corn
was 16 per cent. less than the average for the same period of the preceding century ; but, notwithstanding that, the price of labour rose greatly during the same period; and-what was least to be expected-agricultural labour rose 16 per cent. Tooke says, ' The fact, indeed, of a rise of money wages in this country coincidently with a fall in the price of corn during the long interval in question, rests on unquestionable authorities.' And Smith says, ' In Great Britain the real recompense of labour, it has already been shown-the real quantities of the necessaries and conveniences of life which are given to the labourers-has increased considerably during the course of the present century (i.e. the eighteenth). The rise in its money price seems to have been the effect, not of any diminution in the value of silver in the general market of Europe, but of a rise in the real price of labour in the particular market of Great Britain, owing to the peculiarly happy circumstances of the country.' In the latter part of the century the price of wheat rose enormously, in consequence of a long succession of bad harvests, but there was no corresponding rise in wages.
J. B. Say has also remarked the erroneousness of the doctrine that the price of food regulates wages. 'Experience also contradicts an assertion of Ricardo's. He says that while the price of labour regulates the value of products, it is the price of provisions of first necessity (in Europe, for example, corn) which regulates the price of labour, and that a rise in the price of corn diminishes the rate of profit and raises wages. Well, I am informed by the manufacturers of England and France-especially by MM. Ternaux and Sons, who have mills at Liege, Louviers, Sedan, Reims, and Paris-that it is exactly the contrary which happens. When corn becomes dearer, wages go down. This result is not accidental : the same cause is always followed by the same effect : and the effect lasts as long as the cause. The explanation is not difficult. When corn is very high, the labouring classes are obliged to devote to purchasing grain a part of their wages which they would have employed in superior clothing, or rent, or furniture, or more succulent and various
food : in a word, they reduce all their consumption : and the want of consumption reduces the required quantity of nearly all other products. Hence the reduction of demand lowers profits of all sorts, as well of masters as workmen.'

These observations are true everywhere.

## On the Division of Iabour.

5. Smith commences his work by giving an interesting account of the immense increase of production which is effected by a combination of persons each restricting their work to a single process. This principle is usually called the Division of Labour, to which expression objection has been taken by some eminent Economists, as they say it ought rather to be called the combination of labour. Smith says that in making a pin there are about eighteen distinct operations; and that ten persons working together could make about 48,000 pins in a day-that is, each may be held to make 4,800 in a day-whereas if each person had to do the whole work of each pin, he could scarcely make twenty pins in a day.

Smith has erred in describing the origin of this principle; he says that it has arisen out of the trucking, bartering, or exchanging disposition of men. This, however, is a mistake : because in the Socialistic and Communistic states of society, in which all exchanges are peremptorily forbidden, and which are organised for the express purpose of abolishing all exchanges, the principle of the division of labour is as thoroughly well understood and acted upon as in Economic societies, wherē private property and free exchange exist. For this principle conduces immensely to the increase of the Quantity of the produce, no matter whether this produce belongs to the community in general or to each member separately.

Moreover, many species of animals perfectly well understand and act upon the principle of the Division of Labour ; in fact, Aristotle originated the term in describing the operations of bees. Pliny and Virgil use the same term respecting them,
and modern observation has found that they carry this principle much further than was suspected by these writers. Many other animals, such as ants and beavers, also practise this principle.

This principle was known and acted upon in ancient times. Herodotus says that in Egypt every medical man was compelled to confine himself strictly to one branch of the profession. At Venice in 1172 a law was enacted that every workman should confine himself to a single occupation, in order to secure superior work. The same law was enacted by Philippe le Bel in France.

We may quote an example from J. B. Say equally striking, but probably not so familiar to English readers; he describes the manufacture of playing cards:-' It is not the same workmen who prepare the paper of which the cards are made, nor the colours printed upon them : and in giving attention to only one employment in this matter, we shall find that a pack of cards is the result of several occupations, of which each one occupies a distinct series of workmen or workwomen, who are always employed in the same operation. It is always different persons, but always the same set, who sift the packets and the swellings of the paper which injure the quality of its thickness; the same set of persons paste together the three leaves of which each card is formed, and put them in the press : the same set of persons colour the backs of the cards : the same set always print the outlines of the figures : another set print the colours of the same figures : another set dry over the heater the cards when printed : another set polish them on both sides. It is a separate trade to cut them equally: it is another to collect them and form them into packs : another to print the covers of the packs: and yet another to pack them : without counting the duties of the persons employed in buying and selling them; in paying the workmen and keeping their accounts. In short, those in the trade say that each card-that is, each little piece of cardboard of the size of the hand-before being fit to be sold, goes through not less than seventy different operations, which are each the subject of a separate trade. And if there are not
seventy kinds of workmen in each manufactory of cards, it is because the division of labour is not carried so far as it might be, and because the same workman performs two, three, or four distinct operations.
'The effect of this separation of employments is immense. I have seen a manufactory of cards in which thirty workmen produced every day 15,500 cards-that is, more than 500 cards per man. And it may be presumed that if each workman was obliged to perform each operation by himself, and supposing him skilful in his art, he would not complete more than two cards a day : and consequently the thirty workmen, instead of making 15,500 , would only make 60 .'

To give similar details of other trades would fill a volume. We will only give one. In watch-making there are II2 distinct trades, to each of which a boy may be apprenticed; and of which he knows none but that one. It would be interesting to know how many watches these 112 men could make in combination ; and how many if each man made the whole watch; and not only the number but the quality of the watches !

Babbage has observed that the principle of the division of labour not only immensely increases the quantity, but also greatly reduces the cost of production, because different parts of the work require very different degrees of skill. He shows that in pin-making men are employed at $55.6 d$. a day, women at is. $6 d$. ., and children at $6 d$. Four men, four women, and two children can make one pound of metal into 5,546 pins in seven hours and a half, at a cost of a little more than a guinea, whereas if all the persons employed were of the necessary skilt to make the most difficult part it would cost nearly four times as much.

Babbage gives a striking instance of the application of this principle in a great scientific work. The French Revolutionary Government wanted a series of mathematical tables, to facilitate the application of the decimal system which they had adopted. The task was entrusted to M. Prony, who soon saw that even with the assistance of three or four able assistants he could scarcely
expect to finish it during his life. Meditating on this, he happened by chance to take up Smith's work and hit upon the chapter upon the division of labour. He immediately perceived that he might put out his logarithms to manufacture. He accordingly selected five or six of the most distinguished mathematicians to discover the best formulæ ; he then appointed seven or eight of an inferior degree of skill to convert these formulæ into numbers ; and he then chose from sixty to eighty who required a very small degree of knowledge to complete the tables. And in this way the whole work, contained in seventeen large folio volumes, was executed. And many other public works of great utility might be executed by adopting this plan.

## On the Workman's Share of the Price.

6. It is now perfectly well understood that the Price of the product is the Fund out of which wages are paid. The master's Profit and the Workman's wages both come out of this Fund ; and the only possible contention is to ascertain how it is to be divided.

But the whole of this fund is not available for division : first there must be deducted a sum sufficient to maintain all the fixed and circulating capital in full working order : then there must be also deducted a fair interest on the sum invested as fixed and circulating capital. After deducting these sums from the Price of the product, the remainder is the fund available for division between masters and workmen.

Masters and workmen, however, often take different views as to the principle on which this fund should be divided.

The Masters' view often is that Labour is simply a commodity, which has its market value like any other, governed by the general Law of Supply and Demand : and that the workmen have no right to inquire into the Profits which they make by their skill and foresight, or which may accrue to them from a favourable turn of the market.

Workmen, however, are often far from agreeing to this view
of the matter. They, or at least the reasonable ones, admit that the Capitalist is entitled to fair profits on his capital engaged, and also to a reasonable reward for skill, management, superintendence, \&c. After that, however, they think that the remainder should be divided among themselves as Wages.

To which the masters reply, that in many cases in certain trades the business is often carried on at a heavy loss, and that if the workmen are to appropriate all the profits to themselves, they must also be called upon to share the losses ; which is, as a matter of fact, impracticable : 'and therefore they have no right to share all the profits.

In many cases where expensive machinery is employed, as in cotton mills, the machinery must be kept going at any cost, and in a period of depression masters work at a heavy daily loss, simply to prevent the machinery from deteriorating, and the workpeople from starving, and the necessity of breaking up their establishments. And if the workpeople devour all the profits in time of prosperity, where are the funds to come from to maintain them in a period of depression? If the bees devour all the honey in summer, what is to feed them in winter? Hence it is plainly to the real advantage of the workpeople themselves that they should not devour all the profits as soon as they are made. By allowing them to remain in the hands of the masters, they are in reality laying up an insurance fund for a rainy day.

This portion of the price of the product is a superior limit which wages cannot possibly exceed. It is a cast-iron limitthe result of the inexorable Law of Supply and Demand, which imposes a superior limit on wages.

Now we may observe that there are two kinds of Labour in commerce : one of which is necessary to produce the profit; the other is not.

In a merchant's office, or in a bank, the clerks, servants, messengers, porters, \&cc., contribute nothing to the success of the business. Such Labour as there is is subject to the simple rule of Supply and Demand. They have no shadow of a claim of demand a share of the Profits : and if the heads of the
establishment give them a bonus on a successful year, that is an act of mere grace and favour. So the servants of a railway company-engine-drivers, guards, porters, and clerks-contribute nothing to the success of the enterprise. Their Labour is a mere commodity, which must be paid for whether the line pays any dividend or not. They have no more claim to siave a share of the profits than another company from whom they might buy engines and carriages would have a claim to be paid for them according to the profits the company was earning. Such persons have no more claim to a share of the profits than domestic servants would have to higher wages if their master were successful in business.

But the Labour of operatives, miners, and artisans stands on a different footing altogether. Their labour, their skill, is indispensably necessary, and conduces directly to obtain the product and the profit. Their labour may justly be styled co-operative with that of the master : they are in reality quasipartners with the Capitalist in obtaining the profits, and without them the profits could not be made ; and the master obtains a distinct profit out of the labour of such workmen, which he can estimate in a very different sense from that of the labour of the other class.

The claim of such workmen to a share of the profit which is distinctly due to their work, stands on a totally different footing from that of the other class. It is now pretty generally recognised that such workmen have an equitable claim to a certain share of the profit which is the result of the joint efforts of the master and workmen: though what that share should be, and how they are to obtain it, is a very different matter : moreover it is far easier to determine in some kinds of business than in others.

In some trades it is a settled compact that the wages paid to the workmen shall depend upon the price of the article.

It was said in the 'Times' of July 31, 1874, 'In view of the difficulties that surround the labour question at home, I think it desirable to call attention to one mode of settling affairs of
this sort adopted by the coal-miners at Newcastle to the north of Sydney. A demonstration signalising the settlement was held lately. The chairman of the miners' association took the opportunity to announce the terms of agreement accepted by the managers and miners, which were as follows :-1st. That the minimum rate of wages payable for hewing and all other work usually performed by miners at each of the above-named collieries shall be the rates current thereat prior to the 23rd day of July, 1872 , when the selling price of sound or best coal was $8 s$. a ton, and of small coal $3 s$. 6 d . per ton. 2nd. That, subject to the above limit, the wages payable at each of the above collieries for hewing and all other work usually performed by the miners shall be regulated by the price of coal, and rise and fall with it.' Many other rules were laid down for adjusting the details of this scheme: and submitting all disputes which might arise to arbitration ; and then the correspondent concludes, 'On concluding the above, the chairman announced to coal buyers in Victoria, South Australia, New Zealand, Hong Kong, Batavia, and India that no hindrance in future would exist through strikes to the supply of ships; the commercial millennium of the past had arrived : strikes and lock-outs were things of the past. Various miners addressed the meeting in the same happy and assuring strain.'

In a great many manufacturing establishments throughout England the truth is recognised that those who contribute to the formation of the product should have some share of its increased price; and various schemes have been adopted to effect this, with the happiest results. But in a general outline of this nature we can do no more than allude to them : their separate details would fill a volume.

## On Co-operation.

7. Another method of giving workmen a share of the Profits is by forming Co-operative Societies ; these, in fact, are nothing more than Joint Stock Companies, formed by working men,
who undertake different kinds of business, and of course divide all the profits among themselves. The experiment has succeeded very well in many instances when applied to shops. The subscribers merely buy the goods which they would require to get at retail shops; and divide the profits among themselves. The principle has also been applied to mills and manufactories, but it is too soon to say yet whether it is likely to be equally successful in these cases.

## On Trades Unions, Strikes, and Lock-outs.

8. Failing, however, these methods of satisfying the claims of working men for what they consider their fair share of profits, there is another which has been the cause of a vast amount of misery-viz. Strikes.

Trades Unions were originally benefit clubs and friendly societies for working men, to insure working men against the accidents of life, want of employment, illness, \&c. : and so far as this goes they are undoubtedly very beneficial.

But Trades Unions often interfere between working men and their employers in a way which is wholly unjustifiable ; prescribing methods of executing the work so as to encroach most seriously on the freedom of the masters in carrying on their business : for the express purpose of multiplying labour.

Up till about half a century ago it was illegal for workmen to combine to raise the price of their labour. This of course was monstrously unjust. Working men have as much right as anyone else to set what price they please on the commodity they have got to sell ; and any number of them have a right to agree that they will not take less than a certain price for their labour. But they must carry out their resolution peaceably; and they have no right whatever to prevent other workmen from taking such a price as they please for their work.

It is alleged by the advocates of Trades Unions that by acting in concert workmen can maintain a higher level of wages than if they act separately. This, on the other hand, is strongly
denied by others, who say that Trades Unions have no such effect, and that the wages of workmen in places where there are no Trades Unions have risen quite as much by the natural operation of the Law of Supply and Demand as where there are. It would be wholly impossible in so general an outline as this to examine this question; we can only indicate the nature of the debatable points.

Though, however, workmen have a perfect right to strike to obtain better wages, it is beyond dispute a most dangerous power, and requires to be used with the greatest discretion. As a matter of fact the strikes which have taken place have produced an immense prependerance of evil and misery. There are few things which would be more melancholy or more practically useful than a plain history of the various strikes which have taken place during the last fifty years, and their results.

A Lock-out is the correlative on the side of the masters to a strike on the side of the workmen. As those workmen who are out on strike must be supported by their mates, it is not unusual for working men to endeavour to beat the masters in detail. They agree that the men in one master's employ shall strike, and be supported by the others until that master succumbs. They thus hope to attain their object by treating each master in succession in the same way. When masters apprehend that such tactics are going to be put into play against them, they defeat them by locking out the working men in a body, so as to cut off the supplies. Then ensue those frightful contests between Capital and Labour in which those who win are only a little better off than those who lose. These meagre remarks are all that we can give in this place: the fact is that the subject is too vast, serious, and complicated for an elementary work like this.

## On the Droit-au-Travail.

9. A passionate cry, however, has gone up from many working men that human flesh and blood should not be treated
like dead and senseless commodities by the inflexible laws of Demand and Supply. Sometimes they maintain that they have an absolute right to have such wages as will sustain themselves and their families in comfort, or at least that the State is bound to provide work for them. Under the name of the Droit-au-travail this doctrine has been very widespread among our neighbours across the Channel. It has been tried there many times, but always with the most disastrous results. Experience and reason show that it is entirely erroneous. It is not men who are purchased, but their Labour ; and their Labour is a Commodity subject exactly to the same laws of Value as any other commodity. If a Shakespeare, or a Macaulay, or a Scott were set to do the work of a copying clerk, they would not be paid as a Shakespeare, a Macaulay, or a Scott, but for the work of a copying clerk. If the rule could be applied to Labour it must also be applied to Commodities. For how is Labour paid? Out of the price of the commodity. If a labourer offers the produce of his labour for sale, it is the Demand for the commodity which gives Value to his Labour. Or if he is paid wages to produce a commodity, the master only pays him those wages because he expects that there will be a demand for the commodity : and he can only pay wages to him in proportion. To say, therefore, that a certain price should be fixed for labour is as much as to say that a certain price should be fixed for commodities-an error, indeed, that long prevailed, but which is now completely exploded. If, therefore, the price of commodities is left to be governed exclusively by the Law of Supply and Demand, it follows as a necessary and inevitable consequence that the price of Labour must be so too : for it is the expected price of the product which is the sole inducement to pay wages, and regulates their amount.

But, in fact, if the droit-au-travail be admitted in principle at all, it cannot be restricted to handicraftsmen. If the shoemaker is entitled to call on the State to provide him with shoes to make when there are no feet to wear them : if the mason is
entitled to call upon the State to employ him to build houses when there is no one to live in them : if the tailor can call upon the State to pay him to make endless coats when there are no backs to be covered-why the same law is good for the lawyer, the doctor, the artist, the author, the editor. Every man who chooses to adopt the law as his profession should have a certain number of ten-guinea briefs deposited by the State every morning on his breakfast table : every painter should be commissioned to paint endless Madonnas : every sculptor should be commissioned to carve endless Apollos : every author should have a certain number of copies of his work ordered by the State, which criminals, perhaps, might be sentenced to read : every editor should have a certain number of copies of his paper ordered by the State : though it is not easy to see how the State could provide patients at will for medical men and surgeons.

The fallacy which pervades the doctrine of the droit-autravail is manifest. It demands that work shall be found for the workmen of the nature they are accustomed to. Now why is it that workmen in any particular trade are in distress? Because there is not a sufficient demand for their labour. Because that Species of Labour is over-abundant. All commercial difficulties arise from over-production, and never from under-production. All commercial difficulties arise from there being more of a commodity offered for sale than is suitable to the circumstances of the time. To provide more, then, of any article that is already over-abundant can only aggravate the evil. What is really wanted is more Demand. Consequently the only result which those who produce, by extraneous assist-ance, more than is wanted can effect, is to aggravate and extend the area of suffering, and to reduce those who can maintain themselves to the same state as those who are aiready dependent on the public. Consequently, if the right to labour be admitted, it is indispensably necessary that the work provided should be of some nature wholly different from the workman's usual occupation : and, indeed, it ought to be work which does not come into competition with any independent workmen. And
this is precisely the difference between the droit-au-travail and the English poor-law. In England the droit-au-travail is admitted. It is English Law that if persons cannot find work to support them they are entitled to seek work from the State. The sole but essential distinction in principle is that the doctrine of the droit-au-travail is that the work provided must be such as the workman pleases, the English doctrine is that it must be such as the State pleases.

## Working men do not create Wealth.

10. We must now conclude our remarks on this vast subject, not because it is exhausted, but, on the contrary, because it is so extensive and various that it would require a large volume to itself. We may simply remark that Demand is the sole cause of the Value of Labour, as of its produce, as of everything else. It is Demand only which causes Labour and its Produce to be Wealth. In recent times far too much attention has been given to the Producer, and far too little to the Consumer. Working men, and those who flatter them for the purpose of gaining their votes, are constantly in the habit of proclaiming that they are the creators of all Wealth. But working men are not the creators of all Wealth. Did working men create corn, or do they make it grow? Did working men create cattle and flocks? Did working men ever create any material substance whatever? Did working men create the stones of which palaces are built? Did working men create the great sciences which have done so much for mankind, and by which so much of their labour is directed ? Did they create the land? Did they create the skill and the foresight, and the thousands of millions of Credit, by means of which modern commerce is carried on ? They did none of these things. They bring nothing but their Labour to transform and transport the materials furnished by nature, to supply the wants of others. And whatever they may do, it is not their Labour which constitutes a thing Wealth, but the Demand of the Consumer.

Let all the skill and Labour possible be bestowed on any product, and if there is no Demand for it, it is not Wealth. The Producer and the Consumer are equally necessary to each other : it is only by their joint action that anything is Wealth. As the whole body of ancient writers, the whole of the first school of Economists, and the whole of the Italian Economists show, it is Consumption, or Demand, that is the true essence of Wealth. At every turn this truth meets us, that it is not the Labour of the Producer which constitutes a thing Wealth, but the Demand of the Consumer.

Nothing can be more suicidal than the cry against rich men which so many wild Socialists and Communists have raised. Where would working men be without rich men? If a man has not Wealth himself, but only his Labour to sell, what is most to his advantage ? Why, of course that there should be as many rich men as possible to compete for his Labour. If a man has nothing but his Labour to sell, does he go to a multitude of paupers like himself who cannot buy it, or does he seek a concourse of rich men who will compete for it ? Nothing can be more fatal than the cry against Capital so often unthinkingly uttered. How could working men exist without Capital? A Capitalist is a man who racks his brains to provide work for working men : he gives them their reward before he can get any for himself : and often indeed he gives them their reward and gets none for himself. If anyone wishes to see the effect of a destruction of Capital, let him observe the consequences to working men of a great commercial crisis like that which has recently taken place in the United States, where an enormous amount of Credit which served as Wages for working men has been annihilated. Working men can no more do without Capital than Capital can do without them : and it is to their interest that Capital should increase and multiply as much as possible to compete for their Labour. When working men complain of the tyranny of Capital and the low price of their Labour, it is not the tyranny of Capital which is their enemy, but the tyranny of their own excessive numbers. Their
interest is to multiply their 'tyrants' and to diminish their own numbers. What they want is more Capitalists, more rich men, and fewer working men. However, we are happy to think that working men in this country are touched to a comparatively small extent with the insane frenzy of Continental Socialists and Communists, whose object is to destroy all Capital and rich men. Their struggle in the main is only to obtain what they consider a fair division of the fund which provides both Profits and Wages : and it would be impossible to conceive a greater benefactor to his country than the one who could permanently reconcile the interests of masters and workmen, and put an end to the internecine wars of Capital and Labour.

## CHAPTER X.

## ON RIGHTS, OR INCORPOREAL WEALTH.

1. We have now to consider that gigantic mass of Property which exists only in the form of mere abstract Rights, which is called Incorporeal Property, or Incorporeal Wealth; which is the third order of Economic Quantities.

These are mere abstract Rights to something which will only come into possession at a future time. But as these Rights may be bought and sold, and their Value may be measured in money like that of any material chattel, they are included under the terms Pecunir, Res, Bona, Merx, in Roman Law ; under that of 'goods and chattels' and 'vendible commodities' in English Law, and that of Wealth in Economics.

The explanation of the Theory of the Value of land which we have given in Chapter IV. will make the nature of these Rights readily intelligible. The land is an Economic Quantity producing a series of profits in the future ; and each of these future profits has a Present Value. But every other profitable business whatever in a similar manner produces a continuous series of future profits; and every one of these future profits has a Present Value. And these Rights receive different names, according to the source from which the Profits spring.

We have already considered the Value of the Land, and also the Theory of Credit, which deals with the profits arising out of the industry of men.
2. Incorporeal Property is of two kinds, each of them comprehending many varieties and enormous masses of property-

1. Where the Right of one person to demand a future payment is connected with the Duty of some one else to make the payment. The Right and the Duty constitute a Nexum or Obligation. This species of property may be called Rights of Obligation. It is also called an Annuity ; which is the Right to demand a series of payments from some person.

This species of Incorporeal Property includes Credit, which is the lowest form of an annuity, being usually the Right to a single payment. Rents of houses, lands, copyrights, patents, mines, wires, frames, \&c., which are usually a limited series of payments, up to Property in land, the funds, tithes, \&c., which are the Rights to receive payments for ever.
2. Where the Right only exists to receive some uncertain profit ; but no particular person is bound to make that payment : and there is only the expectation that some one will. This is called the emptio spei, or the emptio rei speratce, in Roman Law. This species of Property may be called Rights of Expectation.

To this class of Property belong Shares in Commercial Companies, Copyrights, Patents, the Goodwill of a business, the Practice of a professional man, Tolls, Ferries, Fisheries, Shootings, \&c.

In modern times Incorporeal Property includes by far the largest amount of existing property.

## On Rights of Obligation.

3. The doctrine of Annuities is a curious commentary upon the arguments of Aristotle, Dante, and the mediæval theologians that interest for money is unnatural and abominable. The theory of annuities entirely depends upon the principle that money naturally produces interest : and that interest also produces interest, an idea that drove Plutarch wild.

An Annuity is the Right to receive a series of payments, from whatever source arising, and the doctrine of Annuities rests entirely on the principle that each of these future payments
has a Present Value ; and that the Right to all or any number of them may be bought and sold like any article of commerce.

The Present Value of an Annuity is, therefore, the sum of the series of the Present Values of all the future payments. Now let us consider a perpetual Annuity, or the Right to receive a series of payments at definite intervals for ever. If money bore no interest, it is clear that the value of such future payment would be exactly equal to the payment itself. Consequently the Present Value of such an Annuity would be the same as the aggregate of the sums to be paid for ever. Therefore to purchase such an annuity it would be necessary to pay down an infinite sum of money, a consequence which is manifestly absurd. Hence such a mode of calculating the value of an annuity is evidently erroneous.

Again, suppose that simple interest is charged : then each future payment is diminished by a small definite sum of uniform amount. And it is evident that to buy an annuity on such a principle would involve exactly the same absurdity as in the former case. That is, to secure a finite annual payment it would be necessary to pay down an infinite sum. And this shows that this mode of calculation is also erroneous.

But if we suppose that compound interest is charged, we shall find that each term of the series will progressively and rapidly diminish. A larger quantity will have to be subtracted from each term in succession, according as the payment is more distant. We shall thus obtain a series of quantities in geometrical progression, the common difference being a fraction:and by the laws of Algebra we know that such a series, even though infinite, has a finite limit. Each term to be added is smaller than the preceding one : until at last they diminish to 0 : and that finite limit is the Present Value of the infinite annuity.

Hence we see that the Present Value of an annuity must always be calculated at compound interest to produce a rational result. The Present Value of each term or future payment is such a sum as, improved at compound interest at a given rate, would amount to the sum in the given time. And the Present

Value of the whole annuity is the sum of the series of Present Values of each term.

It is clear that compound interest is natural and proper, because if a sum of money produces interest, it makes no difference whether it is called principal or interest : and as soon as interest has accrued from the capital, that interest as naturally produces interest as the capital did.

If the doctrines of so many poets, philosophers, and divines had been followed in practice, it would have been impossible to have bought landed property ; but Nature herself refutes their folly: for if seed corn be planted in the ground it naturally increases in a geometrical ratio : and if a person lends another money to buy the seed corn, it is natural that he should receive a proportionate share of the profit made by the use of his money.

As a sum of money is always equal to a perpetual annuity, we have-

$$
\text { Iool. = a perpetual annuity of } 3 l .,
$$

or $100 \mathrm{l} .=$ an annuity of Iol . for a certain number of years.
As these quantities are equal to each other, we may either pay down a capital sum to buy an annuity : or pay an annuity to buy the Right to a capital sum payable either at a definite time : or at a certain event : or only at an infinite distance of time, or a perpetual loan.

In Economics the symbol o denotes the Present Value of a sum of money that will only be paid at an infinite distance of time : and as the Present Value of any sum whatever, however large or however small, paid at an infinite distance of time, is exactly the same-i.e. O-it shows that in Economics, as in every other branch of Physical Science, one o may be any number of times greater than another 0 , which sometimes puzzles juvenile mathematicians.

## On the Funds.

4. We observed in a former chapter that the State is a persona distinct from its individual citizens; consequently they
can trade with it exactly in the same way as amongst themselves.

When a Government wants to raise a large sum of money at once to meet some great public requirement, as a war, or famine ; or to construct some great public work, it borrows the principal sum, and in exchange for the principal it agrees to pay a fixed sum of interest for ever. That is, in exchange for the principal sum it sells a perpetual annuity. This Annuity, or Right to demand this annual sum, was formerly called a Rent ; just as the Right to receive an annuity for the use of lands, houses, mines, copyrights, \&c., is called a Rent. The name Rent has, however, been discontinued in English, though it was used so late as the time of Charles II., but it is retained in French, and this kind of annuity is called Rentes; and a fundholder is termed a Rentier; Turgot calls the moneyed interest l'intérêt rentier.

In English this Annuity is termed the Funds in popular language, because the capital sum is said to be funded or fixed; the legal name is 'Bank Annuities,' because it is, like the first Bank, the contribution of a number of persons. The Government does not bind itself to repay the principal, though it reserves to itself the right to do so. It merely offers for sale a perpetual annuity ; and if the annuitant wishes to get back his principal he must offer the annuity for sale to some one else.

It must be carefully observed that the Funds are not of the nature of a Mortgage, as is sometimes supposed. In English law a mortgage is the actual sale of some specific thing, as a particular piece of land in exchange for a sum of money, with the right of repurchasing the land upon repaying the principal and interest. A mortgage deed is not Credit, but the title deeds to a specific piece of land.

But the Funds are Credit: they are mere abstract Rights to be paid out of the income of the country. They are not titles to any specific things. This has a very important bearing when persons try to estimate the ratio of the National Debt to the general Wealth of the country. Sometimes an estimate is formed of the material Wealth of the country, and the Funds
are compared with that. But this is a very erroneous way of considering the matter. The Funds are a liability to pay about $28,000,000$ l. a year out of the general income of the country : and the true way of estimating the weight of the national debt is to compare this annuity with the annual income of the country ; and by doing this it will be found that the weight of the Debt is very much less than is supposed.

The Government, however, often agrees to pay off a certain amount of the principal by annual instalments. In such cases these annuities are not called the Funds, but Terminable Annuities.

## On Tithes.

5. In Ecclesiastical Law Tithes are the Right to demand the tenth part of the yearly increase from land : the stock upon land : and the personal industry of the people.

Tithes of the increase of the land itself, such as corn, hay, hops, fruits of all sorts, are called predial Tithes: Tithes of the increase of the stock upon the land, such as calves, pigs, lambs, poultry, eggs, butter, cheese, \&c., are called mixed Tithes ; and Tithes of the profits of personal industry of all sorts-handicrafts, arts, and professions-are called personal Tithes.

Some persons may, perhaps, be surprised to hear that by Law Tithes are not only due from the owners of land, but also from the industry of every person in the country. Every great merchant, every advocate, every physician, every engineer, every artist, every author, every commercial enterprise, Banks, Railways, Newspapers, Insurance Companies, are in reality by Law bound to pay one-tenth of the yearly produce of their industry equally with the owners of land. Spelman says that in his day, in many parts of the country, servants paid tithes on their wages.

But all these classes of persons have long ago emancipated themselves from this duty and kept them to themselves : and
the landowners are the only class of the community who have continued to pay them. Up till 1836 Tithes were demandable in kind : but they were then commuted into a Rent charge, which varies according to the price of corn.

## Policies of Insurance.

6. Another large class of Incorporeal Property is Policies of Insurance. As we have seen that a single sum of money may be paid down to buy an Annuity : so equally an Annuity may be paid to buy a single sum payable on some contingency, such as death, or attaining a certain age ; or to indemnify losses by fire, shipwreck, or other accidents. This shows how an Obligation may be Capital : a Policy is an Obligation of the company ; but it produces them a revenue : and hence it is Capital to them.

All these Rights of Obligation are called choses-in-action : because there is always some person who is bound to discharge them, and if he refuses to do so, an action will lie against him.

## On Rights of Expectation.

7. Rights of Expectation differ from Rights of Obligation in this, that though the Right is the same to receive the profits, yet no particular person is bound to make the payment ; but it is only hoped or expected that some one will. This species of Property, therefore, is not a chose-in-action, though it is sometimes erroneously included under that title. It is called in Roman law emptio spei, or emptio rei sperate ; it is merely the Right to an expected or hoped for profit : and hence it may be called a Right of Expectation.

To this class of Incorporeal Property belong Shares in Commercial Companies of all sorts : the Goodwill of a business : the Practice of a Professional man: Copyrights : Patents : Tolls: Ferries: Shootings and Fisheries: Street crossings.

## On Shares in Commercial Companies.

8. A class of Incorporeal Property which has attained gigantic magnitude in modern times is Shares in Commercial Companies of all sorts-Banks, Railways, Steamships, Gas, Insurance, Docks, and many others. The Commercial enterprises of modern times are on such a gigantic scale that they can only be carried on by great associations of persons. These persons are formed into Companies; and, as we have observed, the Company is a persona distinct from its individual members. The individual members pay over their contributions to the Company, and then lose all right to it ; and they receive certificates entitling them to share in the profits made by the trading in the proportion in which they have subscribed to the Capital. These certificates are called Shares. The members of a Joint Stock Company are like the fundholders ; they have no right to demand back their subscriptions from the Company ; but if they want their money, they can sell their shares in the open market.

The Value of the Shares in no way depends upon the sum originally paid for them : but enitirely on the income or profits made by the trading of the Company ; and of course the average rate of interest. If the profits made by the Company fall short of the average rate of interest, the Shares fall to a discount : if the Profits made exceed the usual rate of interest, the Shares may rise to an enormous premium. The most remarkable difference in Value between the original Capital paid in and the Value of the Shares probably that ever existed is the New River Water Company. When Sir Hugh Myddelton and his sagacious co-adventurers in the reign of James I. constructed this canal, so little were the blessings of pure water understood by the citizens of London that the patriotic projector was ruined and obliged to sell his shares. However, the work was at length effected, and the shares upon which $100 l$. were paid originally sold in 1878 at the rate of 93,000 .

## The Goodwill of $a$ Business.

9. Analogous to the Shares in a Commercial Company, only that it is not recorded on paper and sold in the market, is the Goodwill of a business. When a trader has established a reputation in any commercial way the expectation of future profits is a valuable Property, which he can sell and dispose of quite separate from the house or shop, or the goods actually in the shop. This property is fully recognised by Courts of Law as part of the fruits of accumulated industry, just as much as any material product. But, as it is always fixed to a particular place, it may be called Incorporeal Real Property.

We may cite an instance which may interest our readers. Boswell says that Johnson was appointed by Thrale, the great brewer, one of his executors. In that capacity it became his duty to sell the business. When the sale was going on 'Johnson appeared, bustling about, with an inkhorn and pen in his button-hole, like an Excise man : and on being asked what he really considered to be the value of the property which was to be disposed of, answered, "We are not here to sell a parcel of boilers and vats, but the Potentiality of growing rich beyond the dreams of avarice."' This latter phrase was merely Johnsonese for the Goodwill of the business. The price realised was $35,000 l$., and it was merely the Right to the future profits of the business.

When the great banking house of Jones, Loyd, and Co. sold their business to the London and Westminster Bank, it was said that the price given was 500,000 .

In a similar way every trading house in the country has a Goodwill of more or less value, which is a saleable commodity like any material chattel.

## The Practice of $a$ Professional Man.

10. Another species of Incorporeal Property analogous to the Goodwill of a business is the Practice of a Professional
man. Not only do dealers in material products create a business by their industry and labour, which may be sold, but also dealers in immaterial products, such as medical men, solicitors, \&c., do the same, and it is capable of being sold. This is called a Practice. If a young doctor or solicitor wishes to start in business it is very usual for him to buy a Practice, and of course such a purchase is Capital.

## On Copyrights.

11. Another species of Incorporeal Property of constantly increasing magnitude is Copyright, or the Right to the profits to be made by the sale of works of literature and art : or the Property in Ideas. When an author publishes a successful work, the Right of multiplying copies of it and of receiving the profits from so doing is a valuable property, termed Copyright. Not only does this extend to the actual works so published ; but also to the names of periodirals.

Suppose that anyone were to conceive the audacious idea of buying up the 'Times' newspaper : what would its price comprehend? Would it be merely the brick buildings, the steam engines, the presses, and the types, which may be seen and handled? The price of these things would be utterly insignificant. The fact is that by the energy and skill with which the 'Times' has been conducted, it has established an enormous demand for it ; and as innumerable people require to make their wants known, they go to the 'Times' to advertise in it. These advertisements produce an annual revenue whose value can be approximately estimated, and the value of the 'Times' is the value of that expectation or potentiality of future profits.

There is not only Copyright in actual material publications, but also in dramatic representations and things of that nature. It was stated that the Copyright in a popular song, 'Slap bang, here we are again,' sold for 2,000 l.

## On Patents.

12. Anotner torm of Property in Ideas is a Patent, which is a Right granted by Letters Patent from the Crown for the exclusive sale of some mechanical invention. We may observe that no one can have a patent for a principle, but only for some particular application of it. That is, no one can have a patent for a Discovery, but only for an Invention. As soon as a general scientific principle is discovered it becomes universal property: and private persons can appropriate some particular application of it to practical use.

## Advowsons and Benefices.

13. Another form of Incorporeal Property is the Right to receive the ecclesiastical dues in some locality for performing religious services. This Right is called a Benefice : and the Right to nominate the person to these Benefices is called an Advowson.

## Tolls and rerries.

14. Tolls and Ferries are the Right to demand compensation for establishing roads, ferries, docks, \&c.

## Shootings and rishings.

15. Another species of Incorporeal Property which hasincreased very much in magnitude in recent years are Shootings and Fishings. These are not the Rights to any particular birds or any particular fish, but the Right of shooting at birds and killing them if the sportsman can, and the Right of trying to catch fish.

## Street Crossings.

16. We may mention as a last species of Incorporeal Property street crossings. These are made the subject of regular
property by the poorer classes, just as much as landed estates, and they are bequeathed from one to the other and are made the subject of marriage portions. There cannot be a more striking example of the emptio spei than these street crossings, as no one is bound to pay toll for them : their receipts depend purely upon the charitable feelings of the passengers : and yet they are Capital to their occupiers.

## CHAPTER XI.

ON THE FOREIGN EXCHANGES.

1. In the preceding chapters we have given a sketch of the mechanism of the internal commerce of the country : we must now give a very brief outline of its external commerce, which is comprehended under the title of the Foreign Exchanges. There is of course no difference in principle between the two; because the principles of commerce are uniform throughout the world ; but there is somewhat more complication in the details; because nations use different systems of coinage ; and they establish artificial barriers between their mutual intercourse.

## On the Meaning of an Exchange.

2. An 'Exchange' in commerce is where a person pays his Creditor by transferring to him a Debt due to himself from some one else.

When a person pays a Debt by a Bank Note, or a Cheque on his banker, it is an 'Exchange.' It is an example of Novatio.

Two passengers are travelling in an omnibus. The fare is sixpence. One passenger pays the conductor a shilling. The conductor is then indebted to him in sixpence. The other passenger has a sixpence in his hand ready to pay his fare. The conductor by a nod tells him to give the sixpence to the first passenger. The whole transaction is an 'Exchange.'

Three parties and two debts are thus necessary to an Exchange. The Exchange is that branch of commerce which
treats of the remission and settlement of Debts between different places by Paper Documents, and the exchange of the money of one country for that of another.

The state of the Exchanges depends upon two distinct things : 1 . The state of the Moneys of the different countries; and secondly, the state of commercial dealings between the countries. The state of the exchanges which depends upon the Moneys of the countries is called the Nominal Exchange : the state of the exchanges which depends upon the commercial dealings between the countries is called the Real or Commercial Exchange.

## On the Nominal Exchange.

3. Suppose that the Coinages of two countries are of the same metal, and that the coinage of one country is taken as the standard ; then the quantity of the coin of the other, which contains exactly the same quantity of pure metal, is called the Par of Exchange between the two countries.

Suppose that the exchanges between England and France were estimated in gold. There is as near as possible onefourth more gold in an English sovereign than in the French Napoleon, or 20 -franc piece. If the English coinage were taken as the standard, it would be equal to 1.25 Napoleon : and 1.25 would be called the Par of Exchange between England and France. The French exchanges are, however, expressed in francs, which are silver coins. If the sovereign contained exactly one-fourth more gold than the Napoleon, we should say that $25^{\circ}$ was the Par of Exchange.

If from any cause whatever the English coinage became degraded, worn, or clipped, sovereigns would not buy so many francs as if they were of full weight. If they were in a very bad state they might perhaps only buy 22 francs, and this would be called a fall in the Foreign Exchanges. Or if an English merchant was bound to pay 2,50of. to his creditor in Paris, he would have to give more than 1ool. to buy the

2,500f. In this point of view the Exchange would be said to have risen so much per cent. against England by the amount of that difference.

If the Coinage is in a depreciated state a merchant can buy a less amount of Foreign Coin with it-that is called a Fall in the Foreign Exchanges.

If he wants to buy a fixed amount of Foreign Coin he must give more of the depreciated coin than he would have to give if it were of full weight-that is called a Rise in the Foreign Exchanges.

These two expressions mean the same thing.
It is evident that this adverse state of the Exchanges will continue so long as the English Coinage remains depreciated : and that the restoration of the Coinage to its proper state will at once rectify the Exchanges.

It is only between countries which use the same metal as their standard that there can be a fixed Par of Exchange. If they use different metals, such as gold and silver, the relative value of these metals constantly varies in the market of the world, like that of any other two commodities; and it is no more possible to have a fixed price of one in terms of the other than to have a fixed legal price of wheat. The only correct way is to speak of the usual Rate of Exchange between them. England uses gold and France uses silver as the standard; con sequently there can be no fixed Par of Exchange between them.

## On the Real or Commercial Exchange.

4. We now have to consider the state of the Exchanges arising from the commercial transactions of the country.

> Inland Exchange.

We will now show how an 'Exchange' is exemplified in practice.

Suppose two cities, London and Edinburgh. Suppose a trader $A$ in London is debtor to $B$ in Edinburgh : and suppose
that $B^{\prime}$ in Edinburgh is also indebted to $A$ in London. Then $A$ sends $B$ an order upon $B^{\prime}: B^{\prime}$ pays the amount to $A$; and the claims between the parties are settled. This is exactly similar to a person paying his creditor in the same town by giving him a cheque on his banker.

This is an example of an exchange with three parties : as an example of an exchange with four parties, suppose that $A$ in London owes $B$ in Edinburgh a certain sum : and that $B^{\prime}$ in Edinburgh owes $A^{\prime}$ in London the same sum: then $A$ in London pays the amount to $A^{\prime}$, and receives from him an order on $B^{\prime}$ for his debt ; $A$ then sends this order to $B$, who presents it to $B^{\prime}$, and receives the money from him. Thus the whole debts between the parties are settled by making payments in the same town instead of sending the money to pay both debts from one town to the other.

When the debts between London and Edinburgh are exactly equal, they may all be discharged without sending any specie. The exchanges are then said to be at par.

Supposing that the debts are not equal, and that Edinburgh wishes to send more money to London than it has to receive, then the demand for bills is greater than the supply: and as everyone would rather send a bill than cash, as it is cheaper to do so, those who had to send money would bid against each other for the bills in the madsket, as for any merchandise, and the price of them would rise, as a premium would have to be paid for a bill on London.

As a matter of fact there is always a greater amount of money seeking to flow from the country to London than the contrary : consequently the demand for bills on London in the country is greater than the supply : and therefore inland bills upon London are always at a premium.

This premium is computed by time. If a person in Edinburgh wants a bill at sight on London he must pay one shilling per cent., or four days' interest. This is called the Time Par of Exchange between Edinburgh and London. There is a similar premium on bills, or Par of Exchange, between all other
towns in the country on London. This is called Inland Exchange.

The exchange of the country upon London is said to be in favour of London and against the country. But it is only unfavourable to those who wish to send money, or to those who wish to buy bills. It is equally favourable to those who have to receive money, or to the sellers of bills.

From this example it appears that when bills in one place upon another are at a Premium the Exchanges are adverse to the first place ; because it has more money to pay than it has to receive : and the demand for bills is greater than the supply. On the contrary, when the first place has more money to receive than to pay, bills upon the second place will be at a Discount, because the supply of bills is greater than the demand.

## On the Limits of the Variations of the Exchanges.

5. Hence the Price of bills to those who have money to send will be at a Premium or a Discount, according as there is more money to be sent away or to be received. But the Premium cannot rise higher than the Cost of sending Bullion: because if it did so persons would prefer to send the Bullion itself. For the same reason the Discount can never fall below the Cost of sending Bullion : consequently the variation of the exchanges are restricted to the Limits of twice the cost of transmitting Bullion between the two places.

These Limits of the Rate of Exchange are called Specie Points; because when the Exchanges reach them, specie may be expected to flow in or out, as the case may be.

## On Foreign Exchange.

6. The principle of Foreign Exchange is exactly the same as that of Inland Exchange, only it is somewhat more complicated, as it involves the exchanges of the moneys of the different countries.

In Exchange between two places the Money of one country is always taken as Fixed, and the Exchange is reckoned in the Variable Quantities of the Money of the other country given for it. The former is called the Fixed or Certain price, and the latter the Variable or Uncertain price.

Between London and Paris the $l$. sterling is the fixed price, and the variable sum is reckoned in francs and cents given for it.

On the contrary, between London and Spain the Spanish dollar is the fixed price, and the variable sum is reckoned in the number of pence which are given for it.

When a certain place is taken as a centre, if the fixed price is the money of that place it is said to receive the variable price : on the contrary, when the money of that place is the variable price, it is said to give the variable price.

Thus London receives from Paris so many francs and cents for the $l$. sterling ; and London gives Spain so many pence for the dollar.

The principle of the Exchange between London and foreign places is of course exactly the same as the exchange between London and Edinburgh. When the Exchanges are against London, Foreign Bills will be at a premium : when they are in favour of London they will be at a discount.

But there is very great complication in the details; because London receives the variable price from some places, and gives it to others: consequently the expressions will have to be reversed according as they are applied to these different places.

For instance, between London and Paris, if the Exchange is against London and bills upon Paris rise to a premium, the $l$. sterling will purchase fewer francs, and therefore the Rate of Exchange will fall below par.

But when the Exchange is favourable to London, and therefore Bills upon Paris at a discount, the $l$. sterling will purchase more francs, and consequently the Rate of Exchange will rise above par.

And the same is true of all places from which London receives the variable price.

But the case is exactly the reverse with respect to all places to which London gives the variable price.

## On Exchange Operations.

7. Exchange operations consist in buying, selling, importing, and exporting bullion, called 'Bullion Operations,' and buying and selling Bills, called ' Banking Operations.'

It may happen from various causes that it may be more profitable to possess bullion at one place than at another. Whenever this is the case Exchange operators export bullion from one place to the other for the sake of the profit. They create bills upon such a place. They draw upon their correspondents, discount their bills, and remit the proceeds to meet their drafts when due.

Suppose, for example, that the Rate of Discount was 2 per cent. in London and 6 per cent. in Paris : that would mean that a bullion merchant could buy gold in London for 2 per cent. and sell it in Paris at 6 per cent. It would be just as if farmers in England were to sell their wheat at 40 s. a quarter when the price of wheat in Paris was 8os. a quarter. The consequence of this would be clear : the corn dealers would buy up all the corn they could in England and export it to Paris. And this drain of wheat would go on until the price of it in England had risen to such a price as to destroy the profit of the operation. It is exactly the same with bullion. So long as English bankers sell their gold at 2 per cent. while the price is 6 per cent. in Paris, bullion dealers will buy as much gold as they can to send it over to Paris : and the only way to stop this is by destroying the profit: that is, English bankers must raise the price of their gold, or Raise the Rate of Discount.
8. We will now take a very simple example to illustrate the general nature of the operations which influence the movements of bullion.

Suppose an English merchant sends 1,000l. worth of goods to

Bordeaux : his agent there would have to consider whether it would be more advantageous to send back the proceeds of the goods in money, or in some native product.

The principal native product of Bordeaux is wine : and whether the agent should send his principal wine or not would depend on the price of the wine at Bordeaux and in London. If from any reason the price of wine happened to be very low in London and high at Bordeaux, he would not send wine ; and if there were no other native product he would have to send specie.

If Bordeaux had only one native product, wine, the chances of finding the markets both at Bordeaux and London in a favourable state for importing produce would be limited to that single article. If it had other products the chances would be increased of finding products to suit the markets : and the chances would evidently be multiplied according to the number and variety of its products. Hence is seen the great importance of having as great a variety as possible of products in a market, because the more chances there are that commercial indebtedness may be settled by products rather than by specie.

Specie is always the most unprofitable article of commerce between countries, because the charges for its transport must be paid out of itself, and cannot be added to its price, as those of merchandise are. The price of merchandise also is always enhanced in the usual course of trade as it passes through the hands of successive dealers. Hence the transmission of bullion from country to country always shows that the export of products has become unprofitable.

From this also we see that the scarcity and dearness of native products is an infallible cause of the export of specie from a country : on the contrary, an abundant supply of products, both domestic and foreign, is a certain cause of its import into a country, as people flock to buy in a well-stocked and cheap market.

When a great and unexpected dearth of some object of prime necessity occurs in England, such as the failure of the
potato crop or the harvest, its price rises enormously high : and the infallible result is to cause a great export of specie for the time being, because our necessity for food is much more pressing and immediate than the necessity of foreign countries for our goods, or their capability of purchasing them. And the only way to arrest such a drain is to effect such a reduction in the price of British goods as to make it more profitable to export goods than specie. It has already been shown that Credit has the same effect on prices as Money, and in cases of a great crisis the effects of Credit are often very mischievous by sustaining the price of home produce at such a level as to prevent its export. In such times there is a great danger of an excessive quantity of specie being exported, so as to endanger the whole structure of our system of Credit. The object of the Bank Act of 1844 is to cause such a reduction of the amount of Credit in circulation at such periods as to prevent a dangerous drain of specie.

Suppose also that, in consequence of some miscalculations and erroneous expectations, our merchants have so over-stocked the markets with our goods that their price has fallen so low as to cause a loss : this is called over-trading : when this is the case it would obviously be absurd to export more goods to incur further losses. The consequence is that nothing but specie will go to buy goods in that market. Hence also we see that over-trading is a sure cause of a drain of bullion from the country.

Over-trading and a failure of the cereal crops of this country are each of them sure causes of a drain of bullion. The most disastrous event for the commerce of this country is when both these circumstances happen simultaneously. It is like a spring tide of disaster. The great monetary panic of 1847 was brought on by several years of over-trading, followed by successive failures of the staple food of the people of England and Ireland.

## On Foreign Loans, Securities, and Remittances as affecting

 the Exchanges.9. Foreign Loans, Public Securities, Bonds of Commercial Companies, now form a regular article of import and export between countries, and affect the Exchanges exactly like any other article of merchandise. Bills of Exchange and the drafts of private families also have greatly increased in recent times. But as all these pass through the Post Office, and not through the Custom House, it is impossible to ascertain their amount. Hence the subject of the Foreign Exchanges is an insoluble puzzle to any persons who look only at the official return of merchandise published by the Board of Trade.

## On Monetary and Political Convulsions as affecting the Exchanges.

10. Monetary and Political Convulsions in our modern artificial state turn the Exchanges in favour of a country; unless this effect is prevented by the issue of Inconvertible Paper. Such convulsions are always attended by a great destruction of Credit, which while it existed performed the function of Money. As soon as this Credit is destroyed there is an intense demand for Money. Money, therefore, rises immensely in Value, both with regard to Goods and Debts : and it immediately begins to flow in from neighbouring countries. In 1799 there was a great commercial crisis at Hamburg. Discount rose to 15 per cent. : that immediately drained bullion from England. In 1825 the Bank, by a long series of overissues, had turned the Foreign Exchanges against the country : but as soon as the great panic set in the Foreign Exchanges turned in favour of the country. The same thing happened in I847 : and in innumerable other instances.

## On the Means of Correcting an Adverse Exchange.

11. There are, then, three great Economic Quantities, Products, Bullion, and Debts, all seeking to be exchanged, all flowing from where they are cheaper to where they are dearer.

But all this mighty mass of Credit is based upon Bullion, and if the Bullion is suffered to ebb away too rapidly the whole superstructure is endangered : and then follows one of those dreadful calamities a Monetary Crisis.

If an adverse state of the Exchange is caused by a depreciated currency, there is no cure but a restoration of the Currency to its proper state. If it is caused by commercial indebtedness there are only two methods of correcting it, an export of produce and a Rise in the Rate of Discount.

It is sometimes alleged that an adverse state of the exchange is itself an inducement to export, on account of the premium at which the Bills can be sold. But a very much more certain means of producing an export is the lowering of their price.

A difference in the Rate of Discount between two countries more than sufficient to pay for the transmission of bullion will produce a flow of bullion from one to the other. But as the cost of transmission falls on the operator, the difference requires to be more considerable than might appear at first sight. And if the Bills be at three months, the profit will be only one-fourth of the apparent difference. Thus Mr. Goschen says that there must be a difference of 2 per cent. between London and Paris to attract gold from one to the other.

But whatever the difference may be, the method is absolutely certain. Directly the Rate of Discount is raised here, traders cease to export Bullion : they begin to import it, and Continental bankers and brokers increase their demand for English bills. As the Rate rises the demand will increase, until at last the price reaches the specie point, and gold begins to flow in, until the necessary equilibrium is restored between Bullion and Credit.

We thus see what an extremely complicated subject the Foreign Exchanges is : because all these different causes may be acting in all sorts of different ways in conjunction or opposition; and of course it requires an intimate knowledge of commercial affairs at any particular time to discern how each is operating.

This must suffice here for a general outline of the subject.

## QUESTIONS FOR EXAMINATION.

## INTRODUCTION.

How may the Schools of Modern Economists be grouped ?
Give any instance of the importance of the word Wealth.
What is meant by saying that Political Economy is a Physical Science?
What is the original meaning of the term Political Economy?
What did ancient writers mean by the word Wealth ?
How many different kinds of Wealth did they notice?
What was meant by Wealth when the word was first used in modern times?
Where and when did the first School of Economists arise in modern times?
Explain fully what they meant by the expression 'Production, Distribution, and Consumption of Wealth.'
What did they mean by Productive Labour? Which classes did they call Productive, and which Unproductive? and why?
What produced a reaction against them ?
What does Smith mean by Wealth ?
Mention any inconsistencies in Smith's use of the term Wealth.
Mention any objection to the System of the Second School of Economists.
What is the definition of the Science adopted by the third School of Economists?
Give some examples showing its advantages.

Explain how Economics is a physical Science, and also a moral Science.
Why is Economics a preferable term for the modern Science, to Political Economy ?

## CHAPTER I.

Explain the meaning of the term Economics Define Wealth.
How many distinct kınds of Wealth are there ?
How many distinct kinds of Exchange does Commerce consist of ?
Define Property.
Mention any words which mean Rights, which are smetimes supposed to mean Things.
Enumerate the different kinds of Property.
How may the Positive and Negative Signs be applied to Property?
Distinguish between a jus in rem and a jus ad rem or in personam.
How is Property 'Goods and Chattels'?
Define Value.
Explain the necessity for Money.
How is Money a form of Credit?
Define Credit.
What is meant by Sale or Circulation ?
What is meant by Circulating Medium ?
What is the legal meaning of Currency?
Enumerate the different kinds of Currency.
Define Price, Discount, and Interest.
Explain why the terms Production and Consumption are not suitable for the modern Science of Economics.
How many different kinds of Production are there ?
What is Cost of Production?
What is Profit? and Rate of Profit?
What is Productive Labour?
What is Rent and Hire?
Define Capital.
In how many ways may Capital increase?
Define Fixed and Floating Capital ; and give instances of each.
What is meant by Payment? and Satisfaction ?
Explain the meaning of persona and res in Roman Law.

## CHAPTER II.

What does the complete Theory of Value comprise?
Define Value.
Give instances of Value.
Can there be a general rise of Prices and Values?
Is the expression Intrinsic Value correct?
Distinguish between Diminution in Value and Depreciation.
What is the Cause of Value?
Is it true that Labour is the cause of Value?
What is the General Law of Value?

## CHAPTER III.

What is meant by Bullion and Coin?
What is meant by the Mint Price of Bullion?
What would an alteration of the Mint Price of Bullion mean?
What is meant by the Market Price of Bullion ?
If the Market Price of Bullion rises above the Mint Price what does it prove?
What is Gresham's Law of the Coinage?
What is a Pound ?
What is the Mint Price of Gold ? and when was it fixed ?
How did Gold become the legal measure of value in England?
What is the present law respecting the Silver and Bronze Coinage?

## CHAPTER IV.

Who brought the Theory of Credit to perfection?
What is the popular meaning of Credit?
Name any writers who have said that Credit is Capital.
How is an Obligation created ?
What do Sciences deal with ?
How are these distinguished ?
How are the Algebraical Signs applied to Time ?
Give any instances of the terms Positive and Negative used by Jurists.

Give a short account of the Theory of the Value of Land.
What is meant by saying that Credit is Negative Capital ?
What are the Three Ambiguities in the Theory of Credit?
What is meant by saying that Debts are Negative Quantities?
What is meant by saying that Debts are Goods and Chattels ?
How is a Credit, or Debt, transferred?
In how many ways are Obligations extinguished ?
How does the Release of a Debt extinguish an Obligation?
When does +100 . extinguish -100 l. ?
How does a Payment in Money extinguish a Debt ?
What is Novation? Give instances.
What is Compensation? Give instances.
What are the two branches of the System of Credit?

## CHAPTER V.

Through how many hands do Goods or Commodities pass in the usual course of business?
How is Credit used in the transfer of Commodities?
Explain how foreign merchants settled their Bills by Compensation.
Give an instance how Credit may be used to form a New Product.

## CHAPTER VI.

What is the meaning of the word Bank ?
Give a short account of the mechanism of Banking
How does a banker discount a Bill?
Define a Banker.
Explain how a customer may Operate on his Account.
What is the nature and utility of Cash Credits?

## CHAPTER VII.

Define Profit and Rate of Profit.
Give instances of the difference of Rate of Profit according to the intervals in which it is made.

Can Profits and Wages increase together ?
Why are the Profits of country tradesmen so large ?
Distinguish between Interest and Discount.
What kind of Property has its Value determined by the Rate of Interest?
Give any instances of a very high rate of interest being paid for Money.

CHAPTER VIII.
Define Rent.
Explain how Rent arises.
Does the Payment of Rent raise the price of corn ?
Does the Payment of Rent affect the prices of goods in shcps?

## CHAPTER IX.

What is the Economical Definition of Labour?
Is Labour a Commodity?
What are Wages?
What is the Wages Fund ?
Does the price of food regulate the Rate of Wages?
What is the Division of Labour ? Give any instances of its effects in increasing the quantity of products.
Which is the Fund which provides Profits and Wages?
State the different views sometimes held by Masters and Workmen as to its division.
What two kinds of Labour are there in commerce ?
Does the same rule apply to both of them as to their remuneration?
What is Co-operation?
What is a Strike ? and a Lock out?
What is the Droit-au-travail?
Is it true in principle?
What is the distinction between the droit-au-travail and the English Poor Law?
Is it true that working men create all Wealth ?
Is it for the interest of working men that Capital should be destroyed?

## CHAPTER X.

How does the Theory of the Value of Land render the nature of Incorporeal Property intelligible?
Of what two kinds is Incorporeal Property?
Give instances of Rights of Obligation.
Explain the nature of the Funds.
Are the Funds a Mortgage on the Property of the country?
What are Tithes?
From whom are they legally due ?
What is a Policy of Insurance?
What are Rights of Expectation?
What is a Share in a Commercial Company?
What is the Goodwill of a Business? or the Practice of a Professional man?
What are Copyrights and Patents?
What are Advowsons and Benefices?
What are Tolls and Ferzies? Shootings and Fishings? Street Crossings ?

## CHAPTER XI.

Under what title is the Foreign Commerce of the country included?
What is meant by an 'Exchange' in Commerce?
What is the Nominal Exchange ?
A bad State of the Coinage is sometimes said to produce a Rise in the Foreign Exchanges, and sometimes a Fall: reconcile these two expressions.
What is the Real or Commercial Exchange?
Exemplify an Exchange between three parties and between four parties.
What are the Limits of the Variations of the Exchange? and their name?
How are the Exchanges between different countries reckoned?
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Give an example of an operation in Foreign Commerce.

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